



Blender 2.64

2.64.0
r51232



mango.blender.org - Tears of Steel

Interaction:

Preset

Links

- [Donations](#)
- [Credits](#)
- [Release Log](#)
- [Manual](#) (1) Camera
- [Blender Website](#) Object Mode
- [User Community](#)
- [Python API Reference](#)

I den här handledningen får du lära dig att i det gratis 3D programmet Blender skapa och animera ett enkelt huvud som du sen kan låta säga något med läppsynk.



Features & Gallery



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Education & Help

Community

De

Get Blender

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För att ta hem ett avancerat gratis 3D-program så gå till:
blender.org
och klicka på Download.

Blender 2.64a

Blender 2.64a is the latest release from the Blender Foundation. To download it, please select your platform and location. **Blender is Free & Open Source Software.**

Blender 2.64a was released on October 10th 2012

Windows 32 bits

Support BL
DVDs or B

Don





platform and location. **Blender is Free & Open Source Software.**

Blender 2.64a was released on October 10th 2012

Windows 32 bits



[Blender 2.64a Installer \(31 MB\)](#)

Requires Windows XP/Vista/7

USA | Germany | NL 1 | NL 2



[Blender 2.64a Zip Archive \(43 MB\)](#)

Requires Windows XP/Vista/7

USA | Germany | NL 1 | NL 2

Blender 2.64a 7z Archive (29 MB)

USA | Germany | NL 1 | NL 2

Blender finns för Windows både som 32-bitars och 64-bitars program. Välj det som passar din dator. För att installera programmet så klicka på Installer.

Windows 64 bits



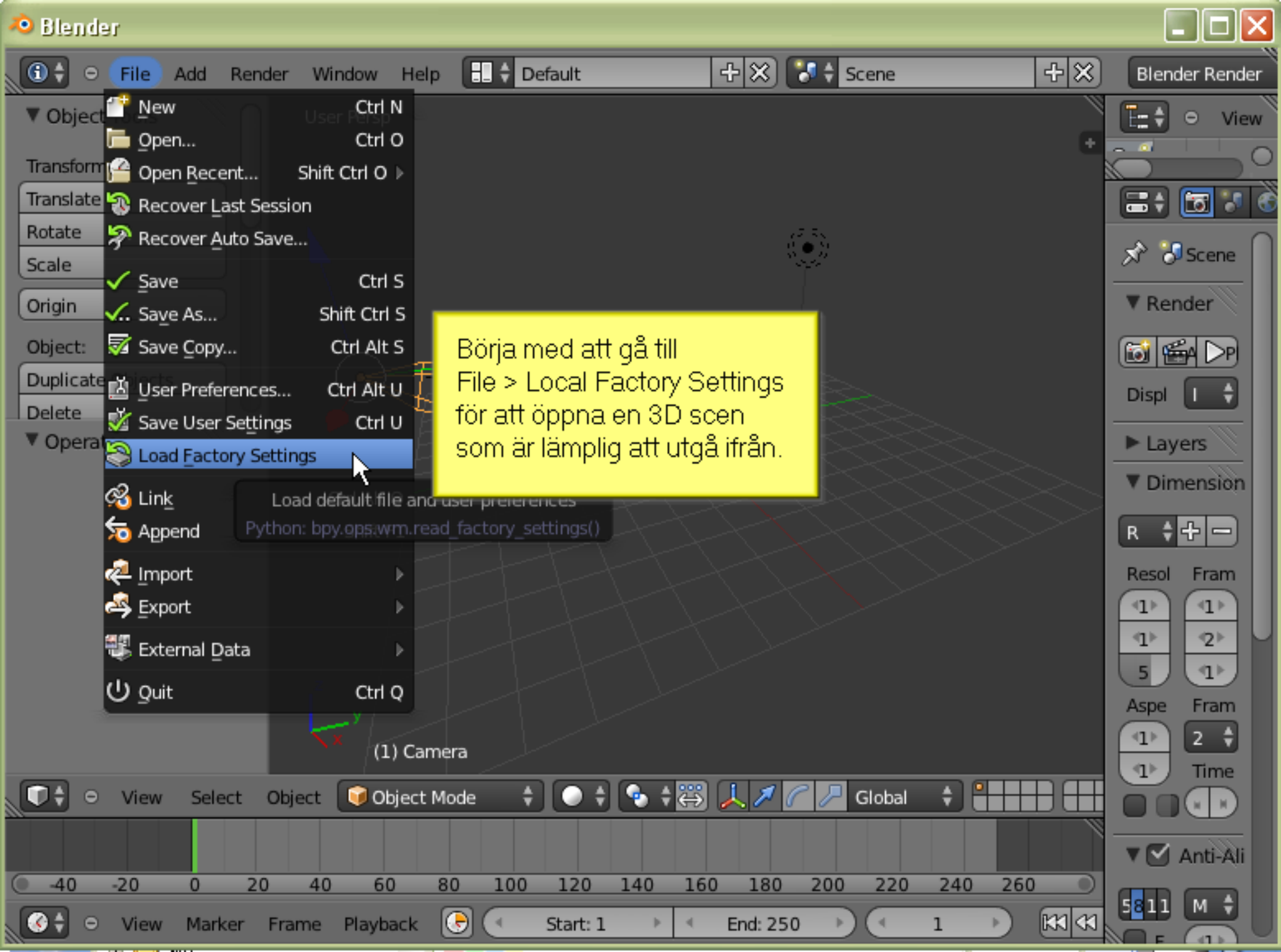
[Blender 2.64a Installer \(36 MB\)](#)

Requires Windows XP/Vista/7 64bit

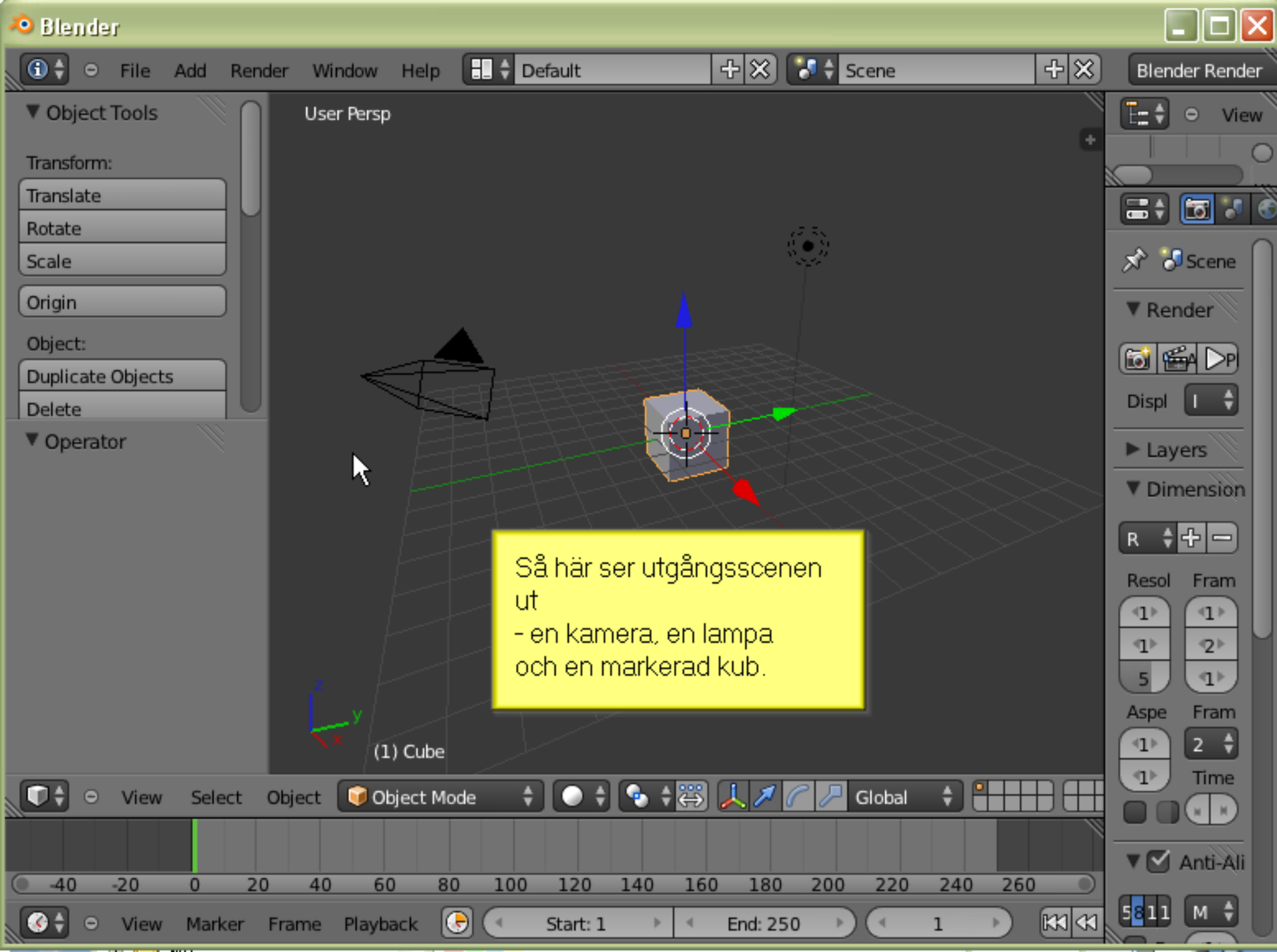


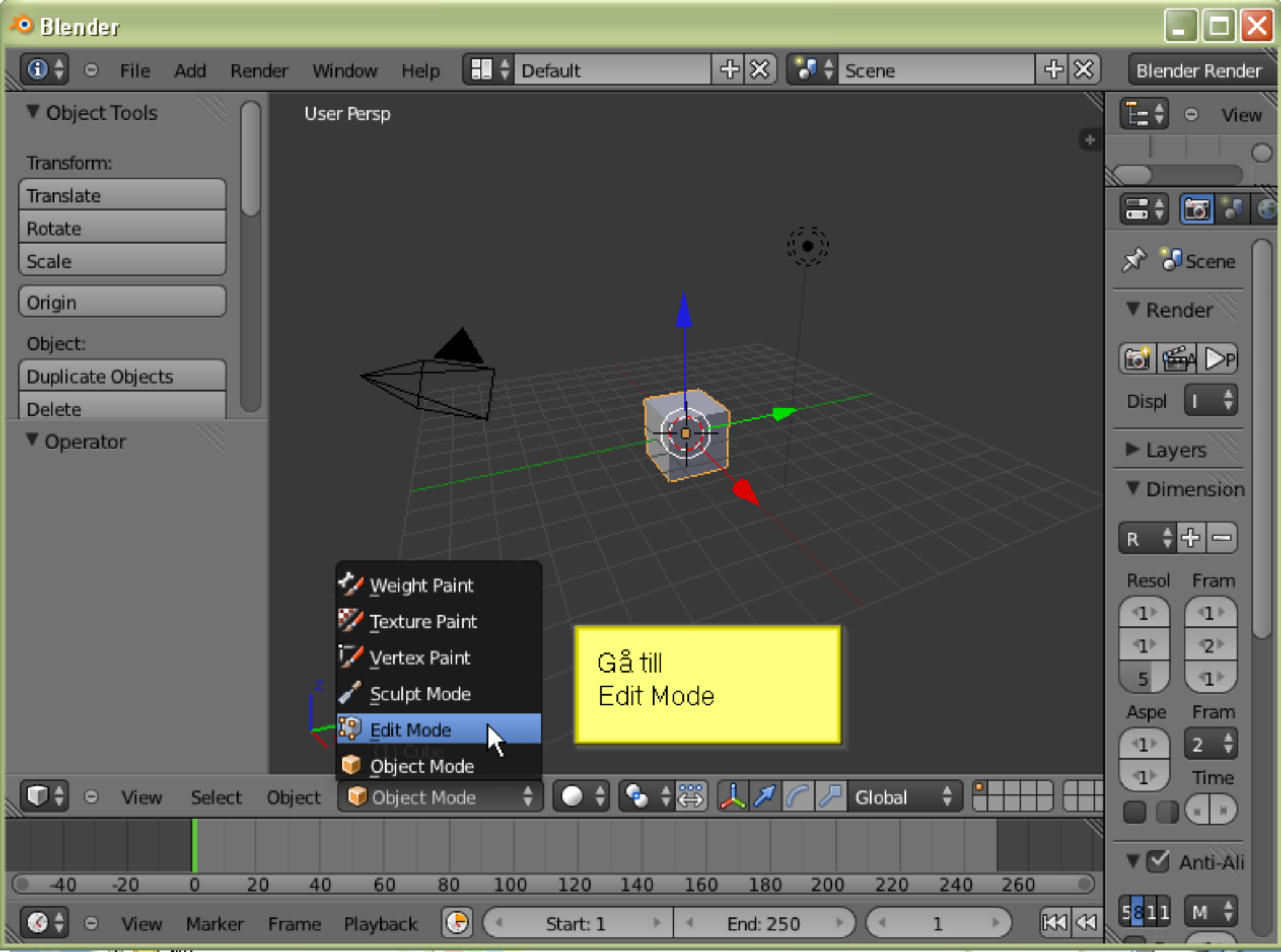
[Blender 2.64a Zip Archive \(51 MB\)](#)

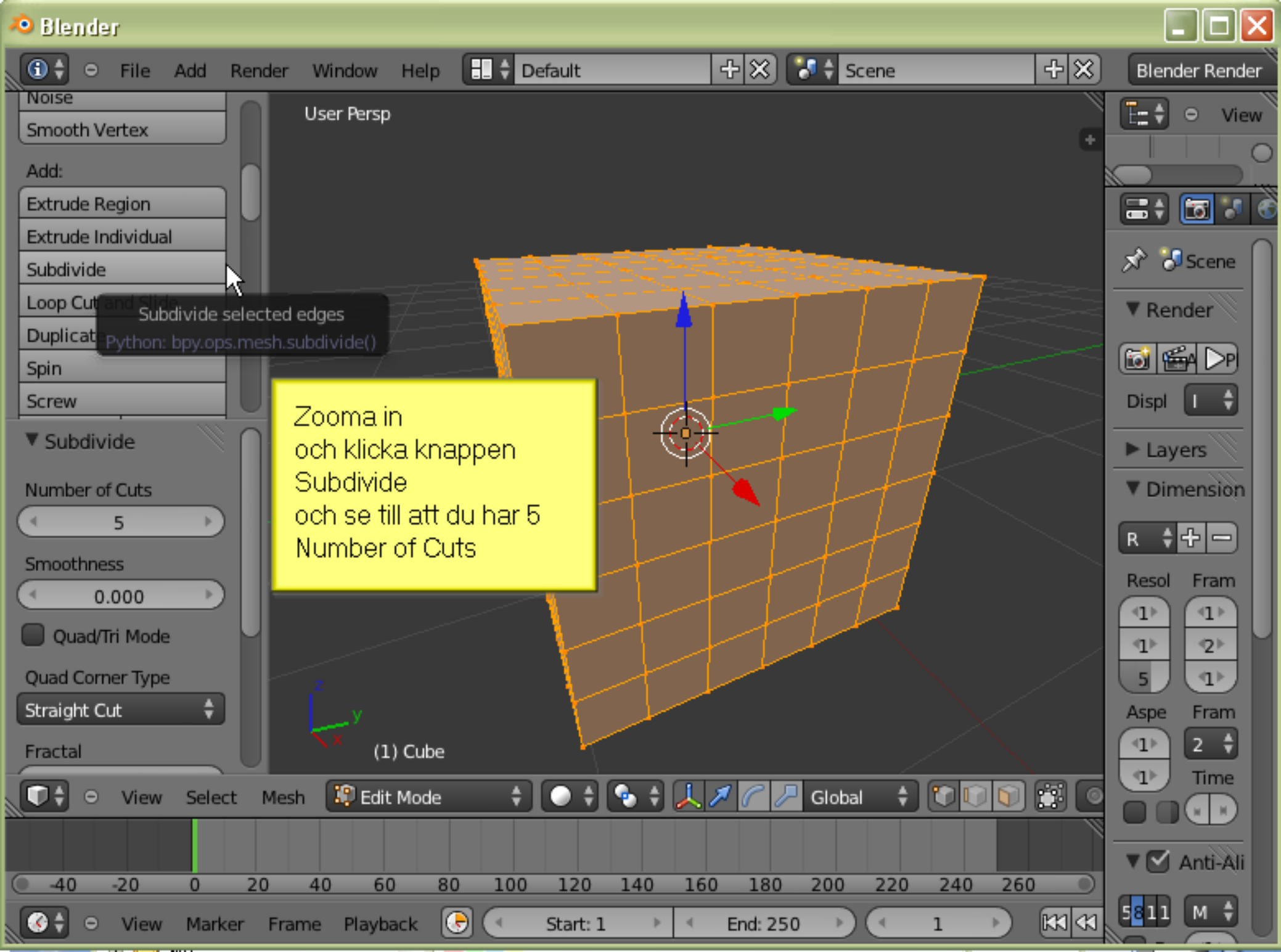
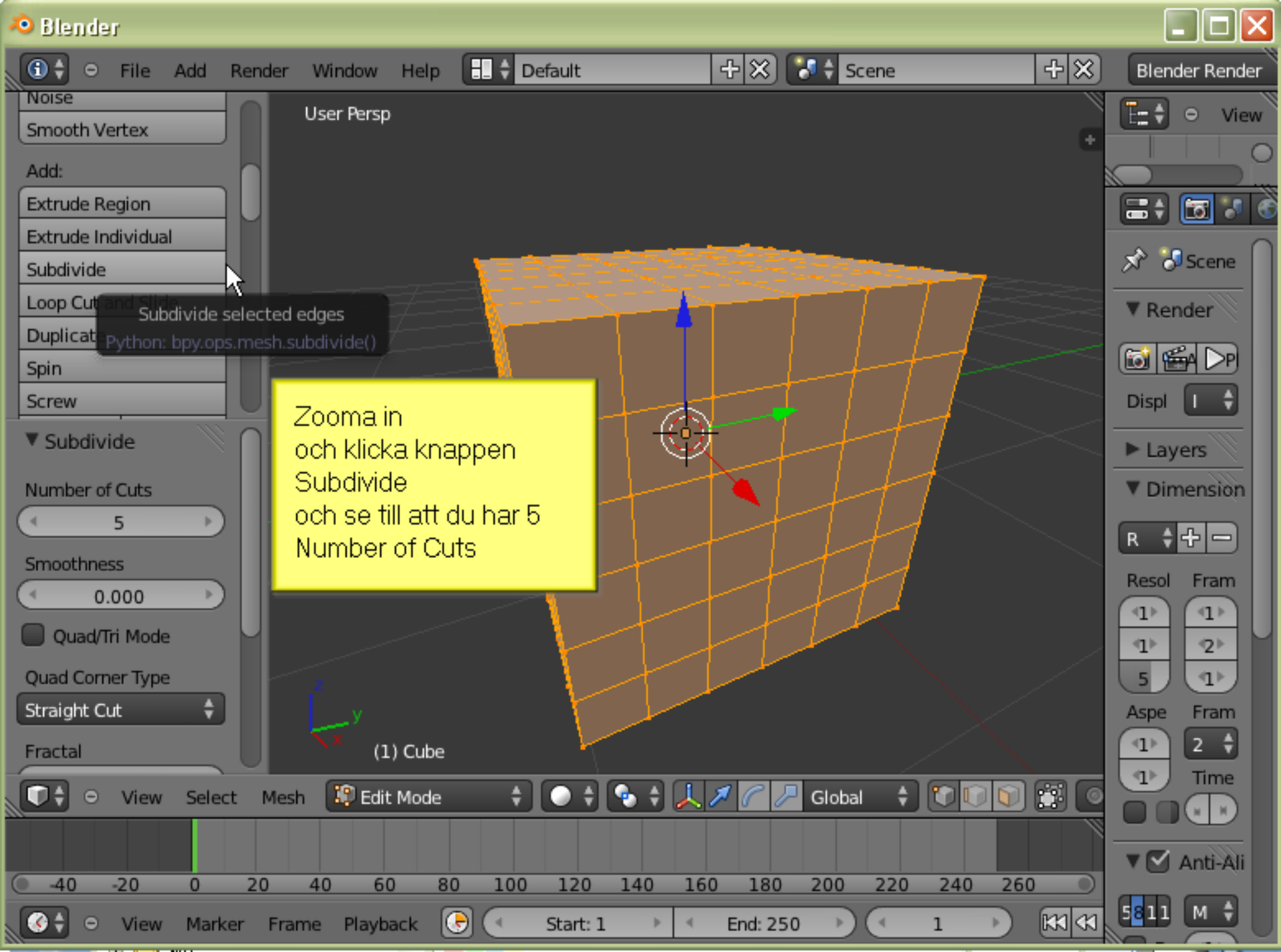
Requires Windows XP/Vista/7 64bit

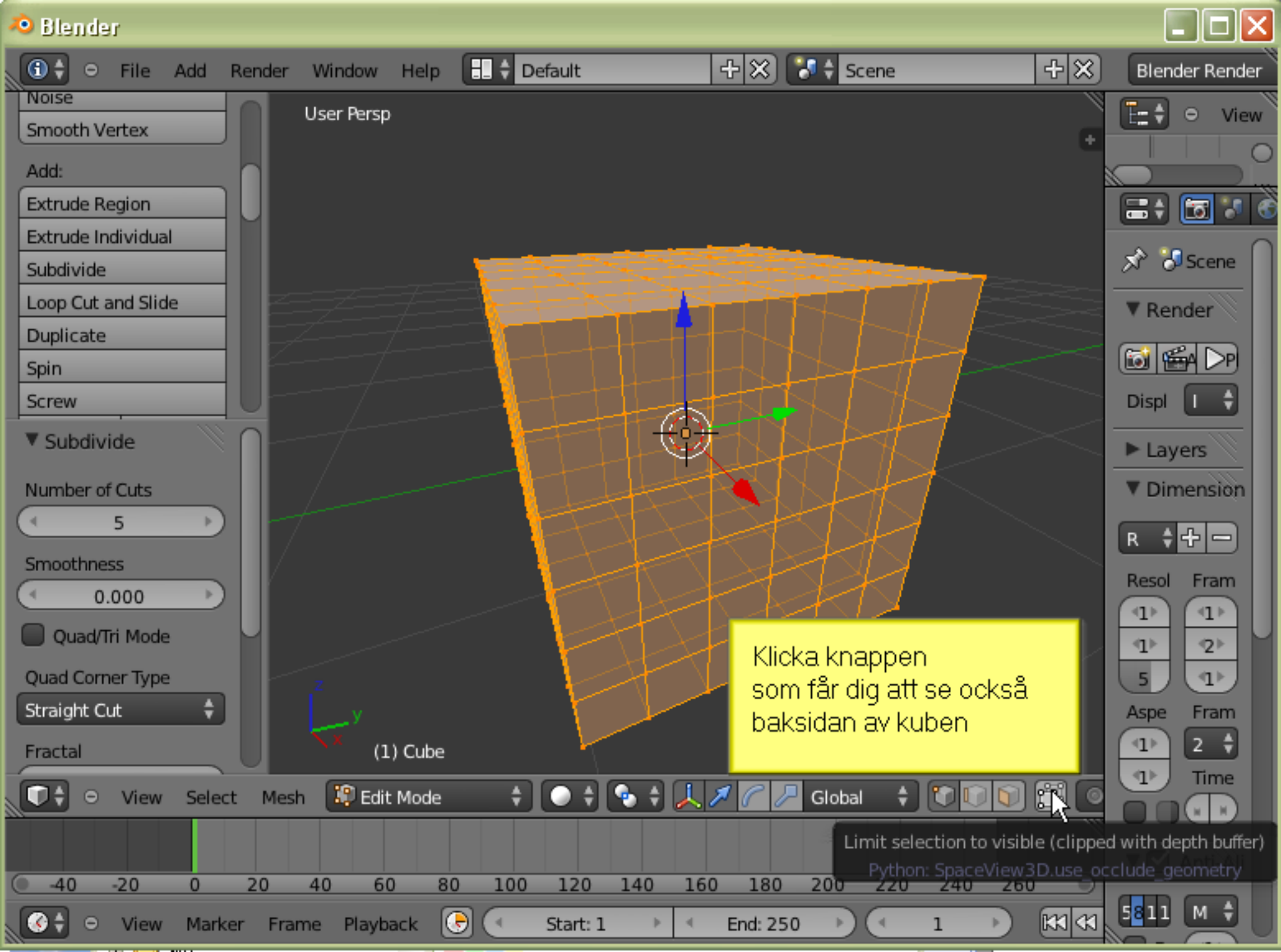


Börja med att gå till
File > Local Factory Settings
för att öppna en 3D scen
som är lämplig att utgå ifrån.







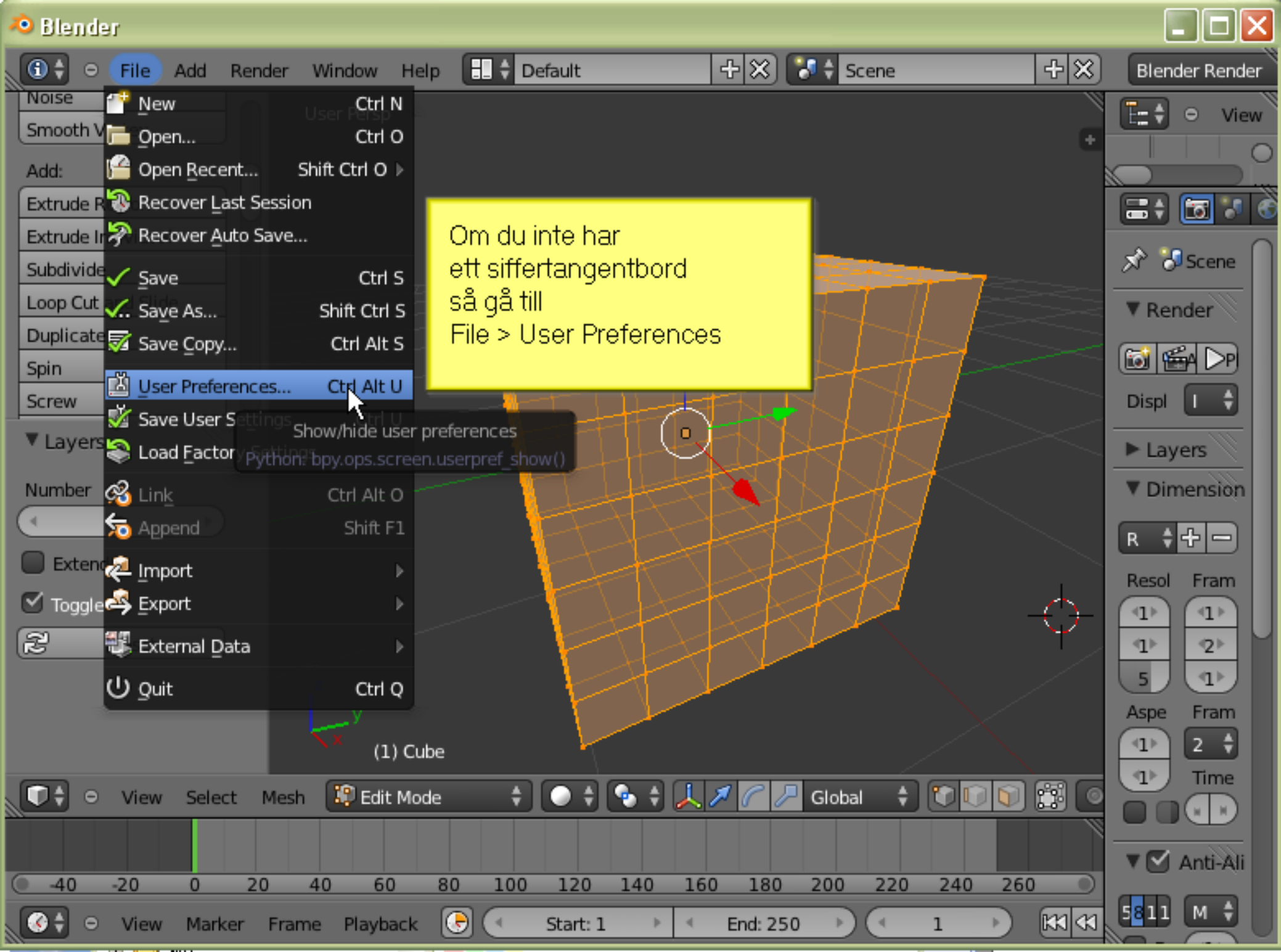


User Persp

(1) Cube

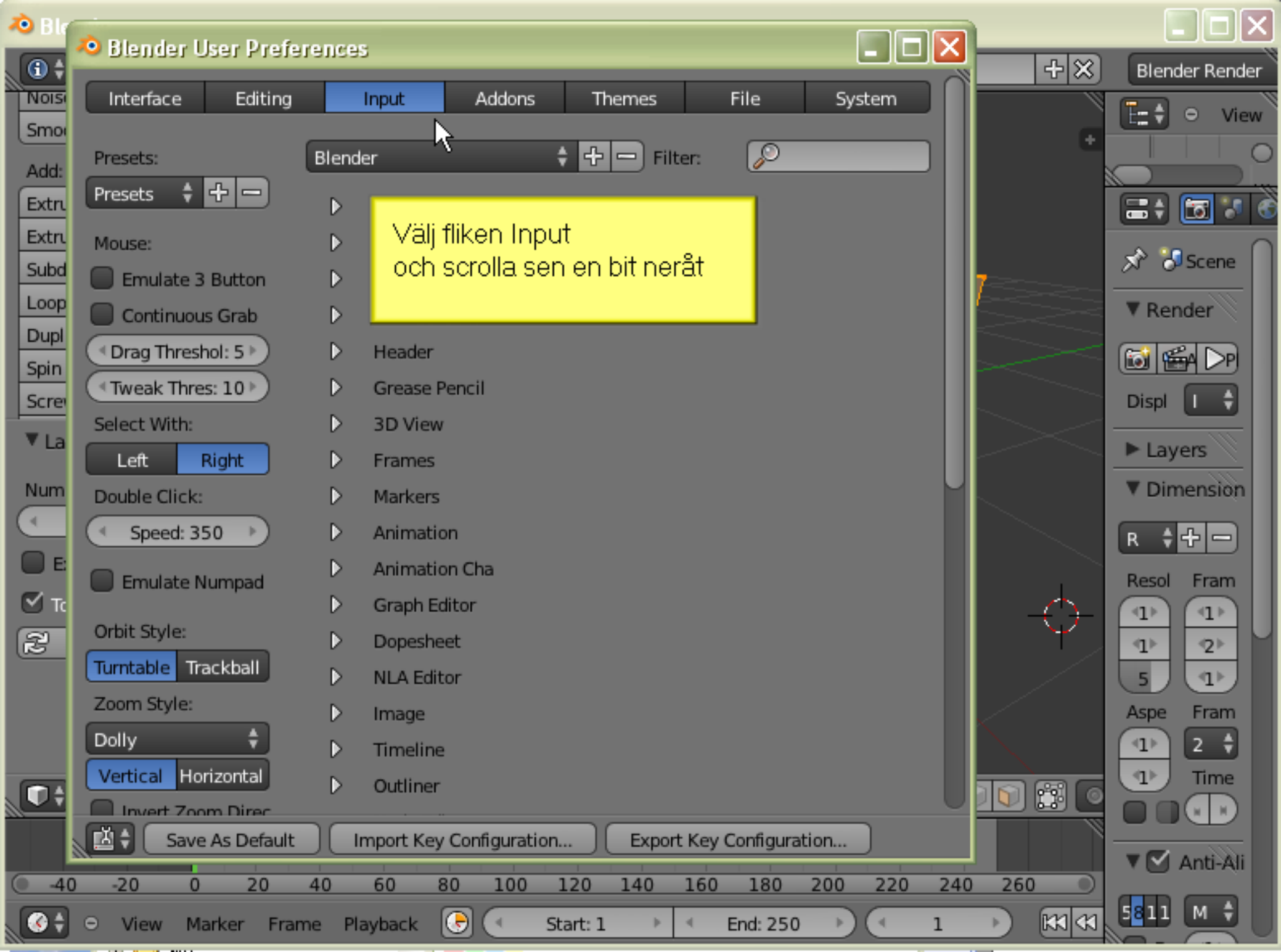
Klicka knappen
som får dig att se också
baksidan av kuben

Limit selection to visible (clipped with depth buffer)
Python: SpaceView3D.use_occlude_geometry



Om du inte har
ett sifertangentbord
så gå till
File > User Preferences

Show/hide user preferences
Python: bpy.ops.screen.userpref_show()



Blender User Preferences

Interface

Editing

Input

Addons

Themes

File

System

Presets:

Blender

Filter:

Presets

Mouse:

☐ Emulate 3 Button

☐ Continuous Grab

Drag Threshold: 5

Tweak Thres: 10

Select With:

Left

Right

Double Click:

Speed: 350

☐ Emulate Numpad

Orbit Style:

Turntable

Trackball

Zoom Style:

Dolly

Vertical

Horizontal

☐ Invert Zoom Direction

▶

▶

▶

▶

▶

▶

▶

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▶

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Välj fliken Input
och scrolla sen en bit neråt

Header

Grease Pencil

3D View

Frames

Markers

Animation

Animation Character

Graph Editor

Dopesheet

NLA Editor

Image

Timeline

Outliner

Save As Default

Import Key Configuration...

Export Key Configuration...

Blender Render

View

Scene

Render

Displ

Layers

Dimension

R

Resol

Fram

1

1

5

1

Aspe

Fram

1

Time

5811

M

View

Marker

Frame

Playback

Start: 1

End: 250

1

1

1

1

1

Blender User Preferences

- ☐ Emulate 3 Button
 - ☐ Continuous Grab
 - Drag Threshold: 5
 - Tweak Thres: 10
 - Select With:
 - Left
 - Right
 - Double Click:
 - Speed: 350
 - ☒ Emulate Numpad
 - Orbit Style:
 - Turntable
 - Trackball
 - Zoom Style:
 - Dolly
 - Vertical
 - Horizontal
 - ☐ Invert Zoom Direc
 - Mouse Wheel:
 - ☐ Invert Wheel Zoo
 - NDOF Device:
 - NDOF Se: 1.000
 - NDOF Or: 1.000
- View2D
 - View2D Butto
 - Header
 - Grease Pencil
 - 3D View
 - Frames
 - Markers
 - Animation

Leta reda på
Emulate Numpad
och bocka för det
så att du sen kan använda
de vanliga sifvertangenterna

Save As Default Import Key Configuration... Export Key Configuration...

Blender Render

View

Scene

Render

Displ

Layers

Dimension

R

Resol Fram

1 1

1 2

5 1

Aspe Fram

1 2

1 Time

Anti-Ali

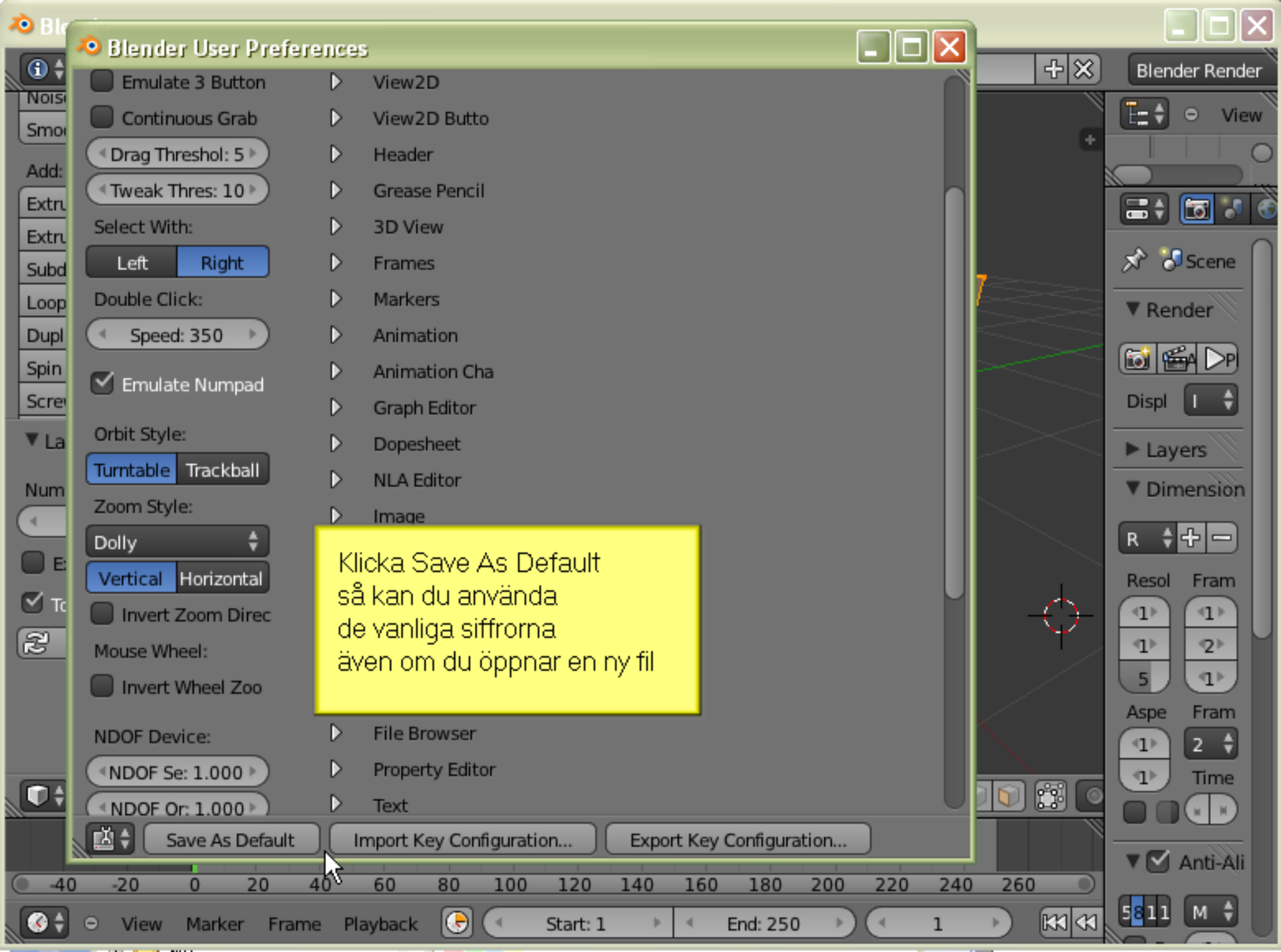
5811 M

View Marker Frame Playback

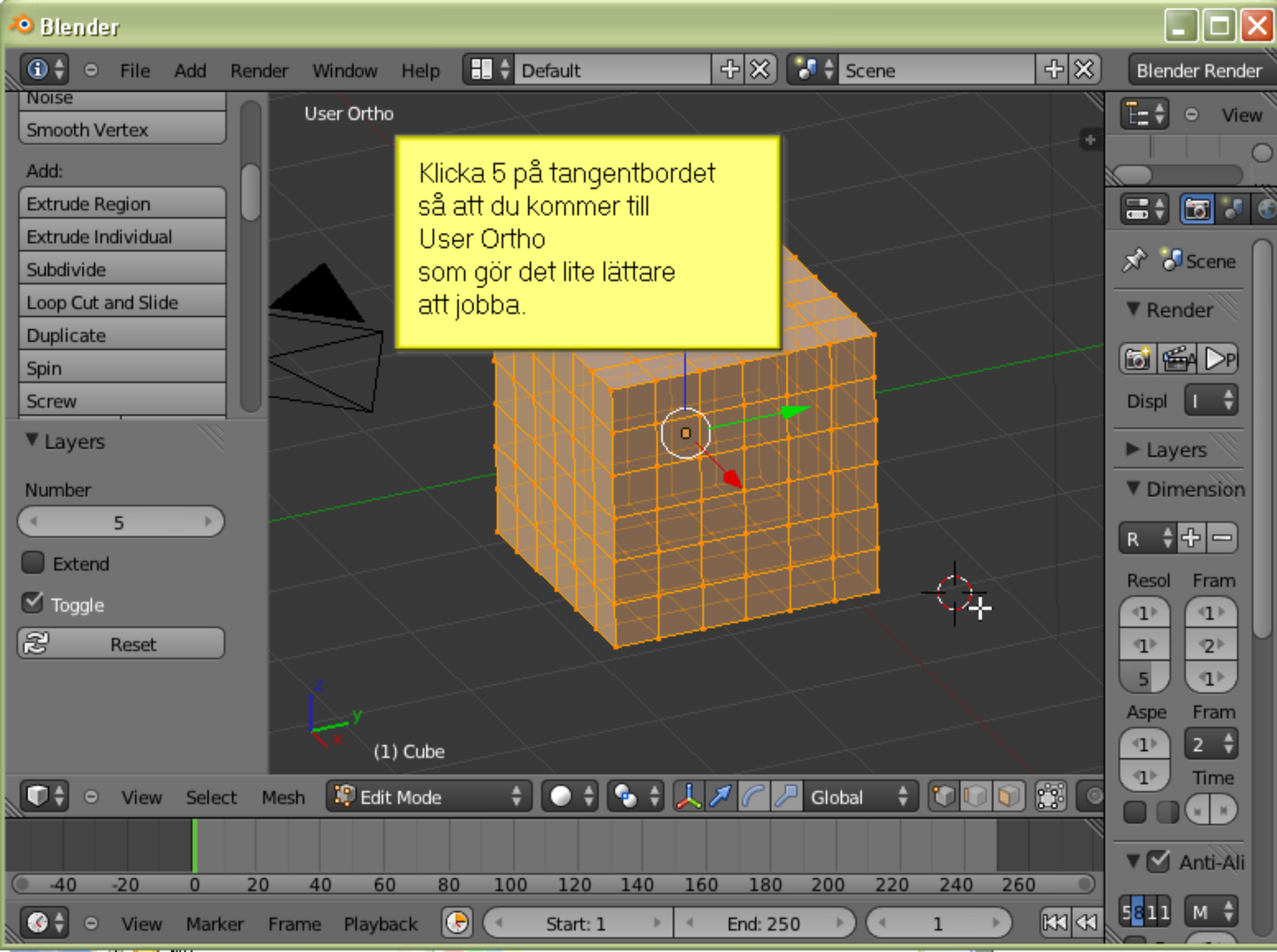
Start: 1

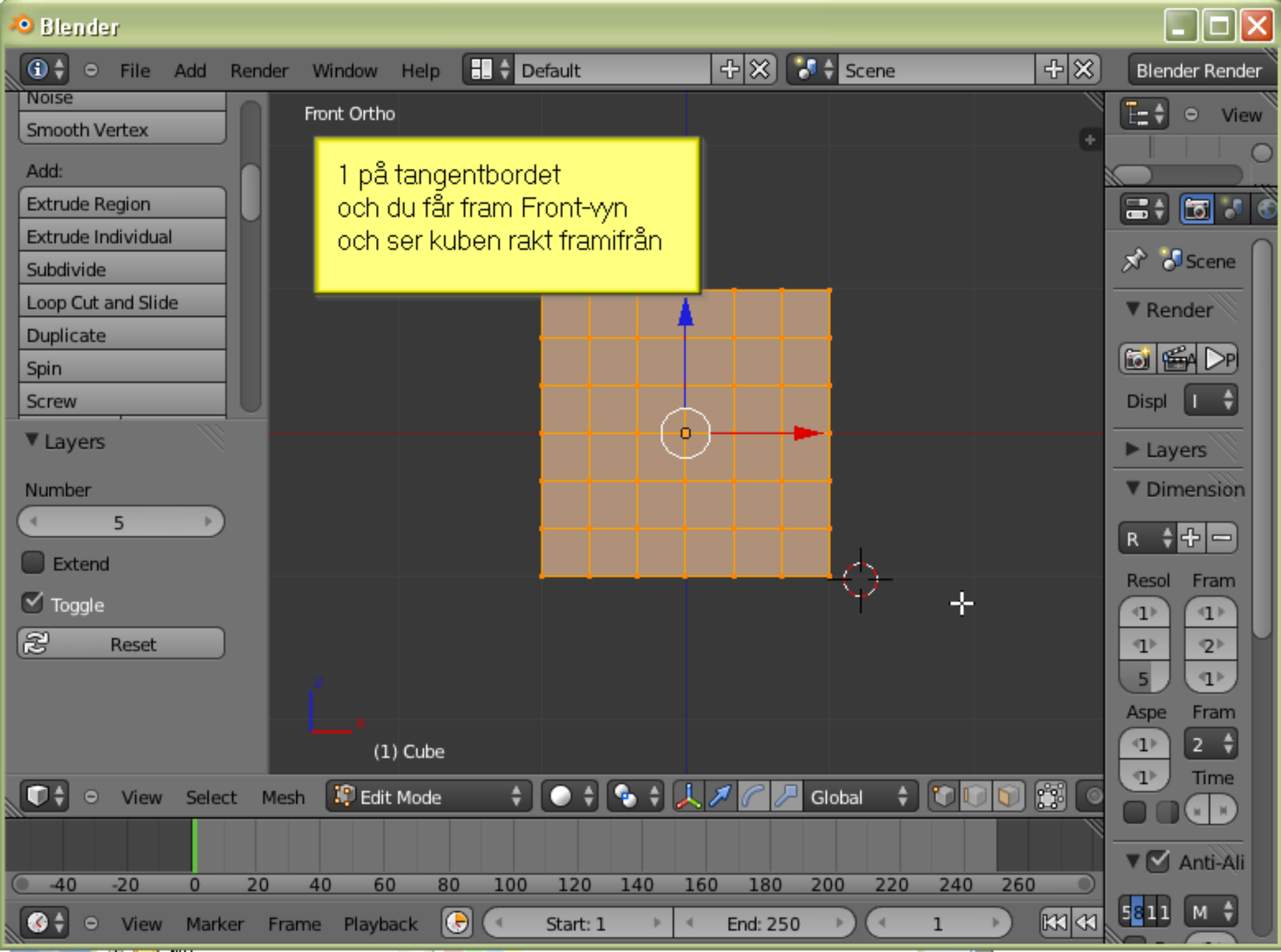
End: 250

1



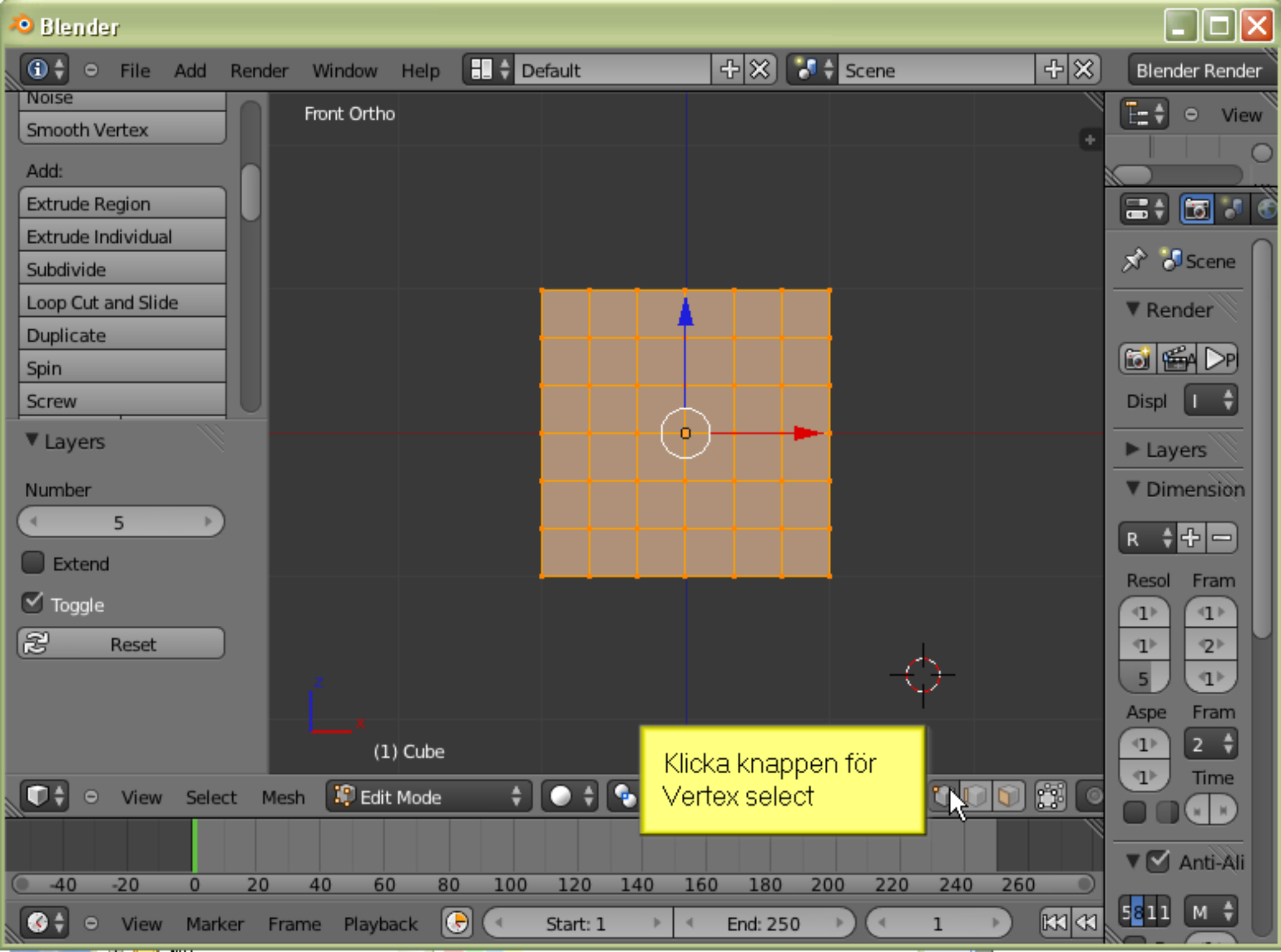
Klicka Save As Default
så kan du använda
de vanliga siffrorna
även om du öppnar en ny fil

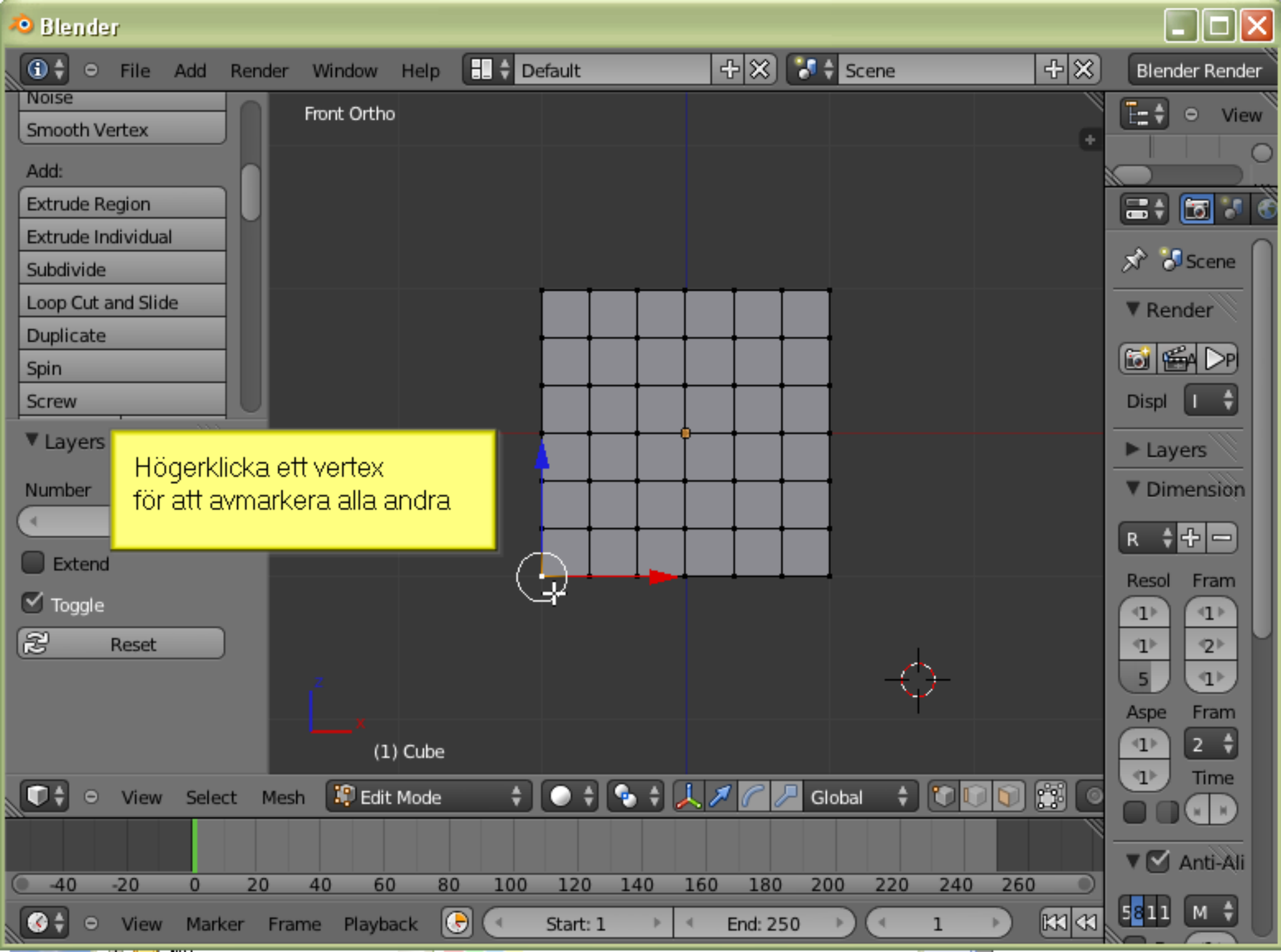




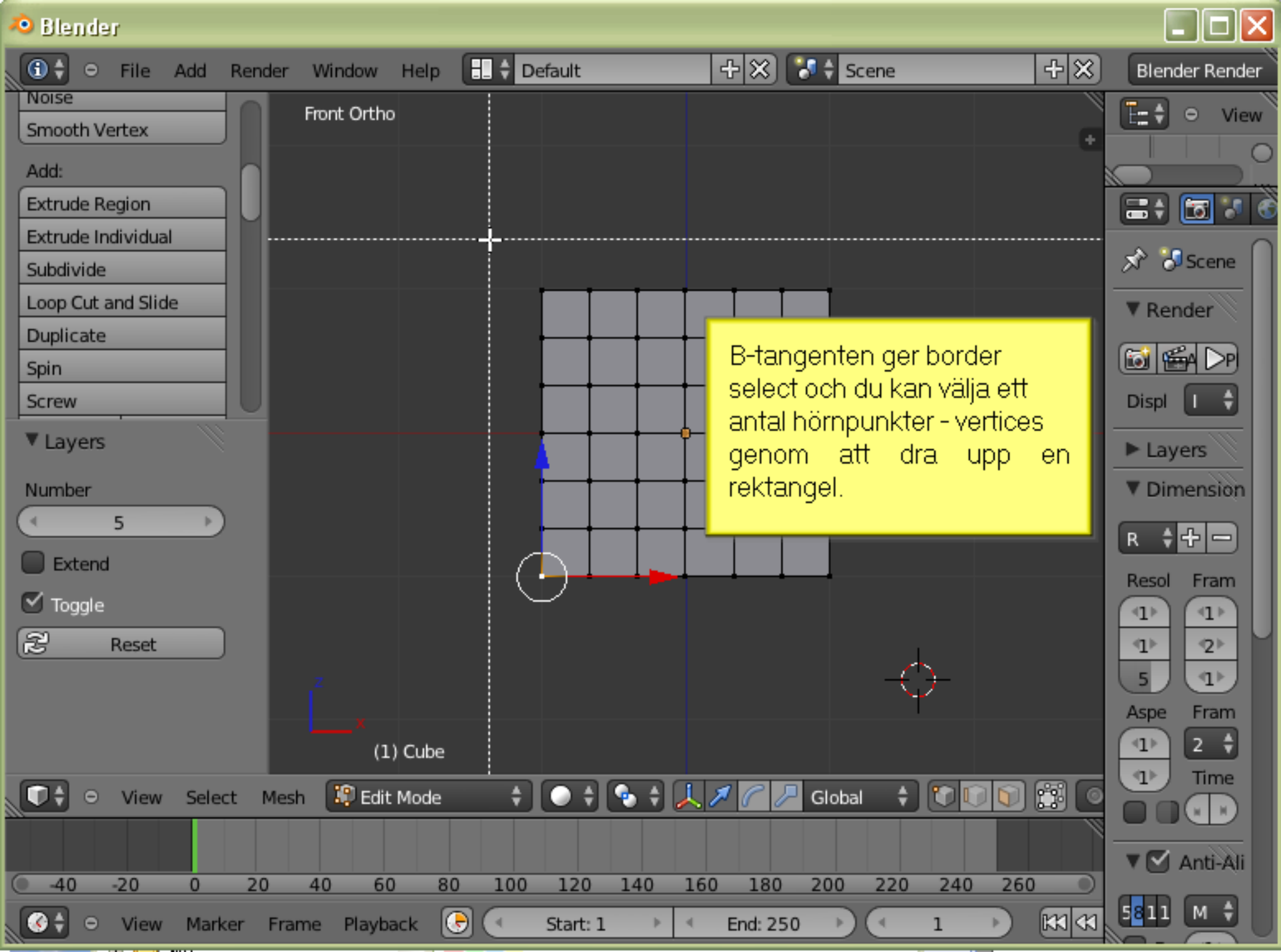
1 på tangentbordet
och du får fram Front-vyn
och ser kuben rakt framifrån

(1) Cube

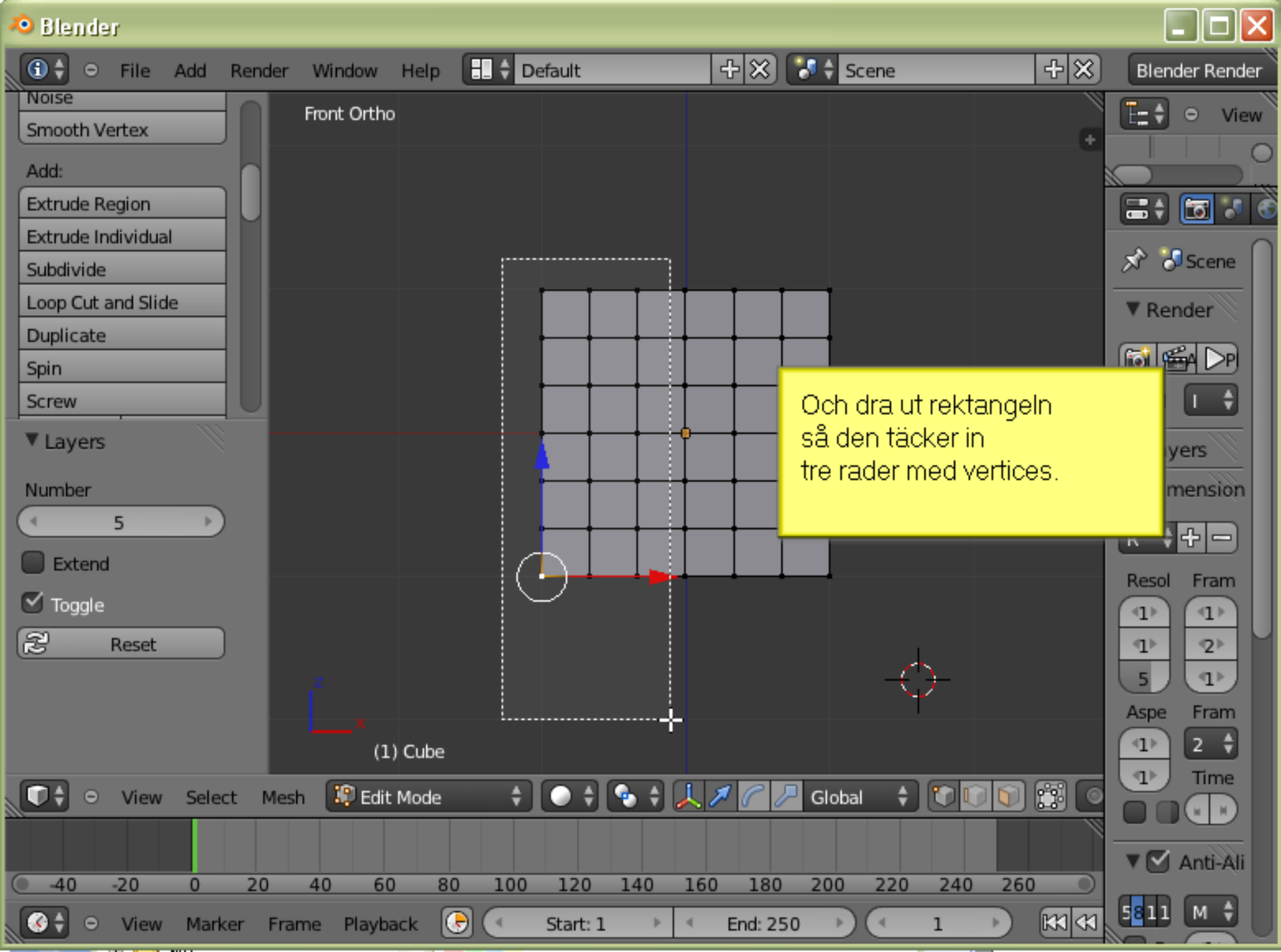




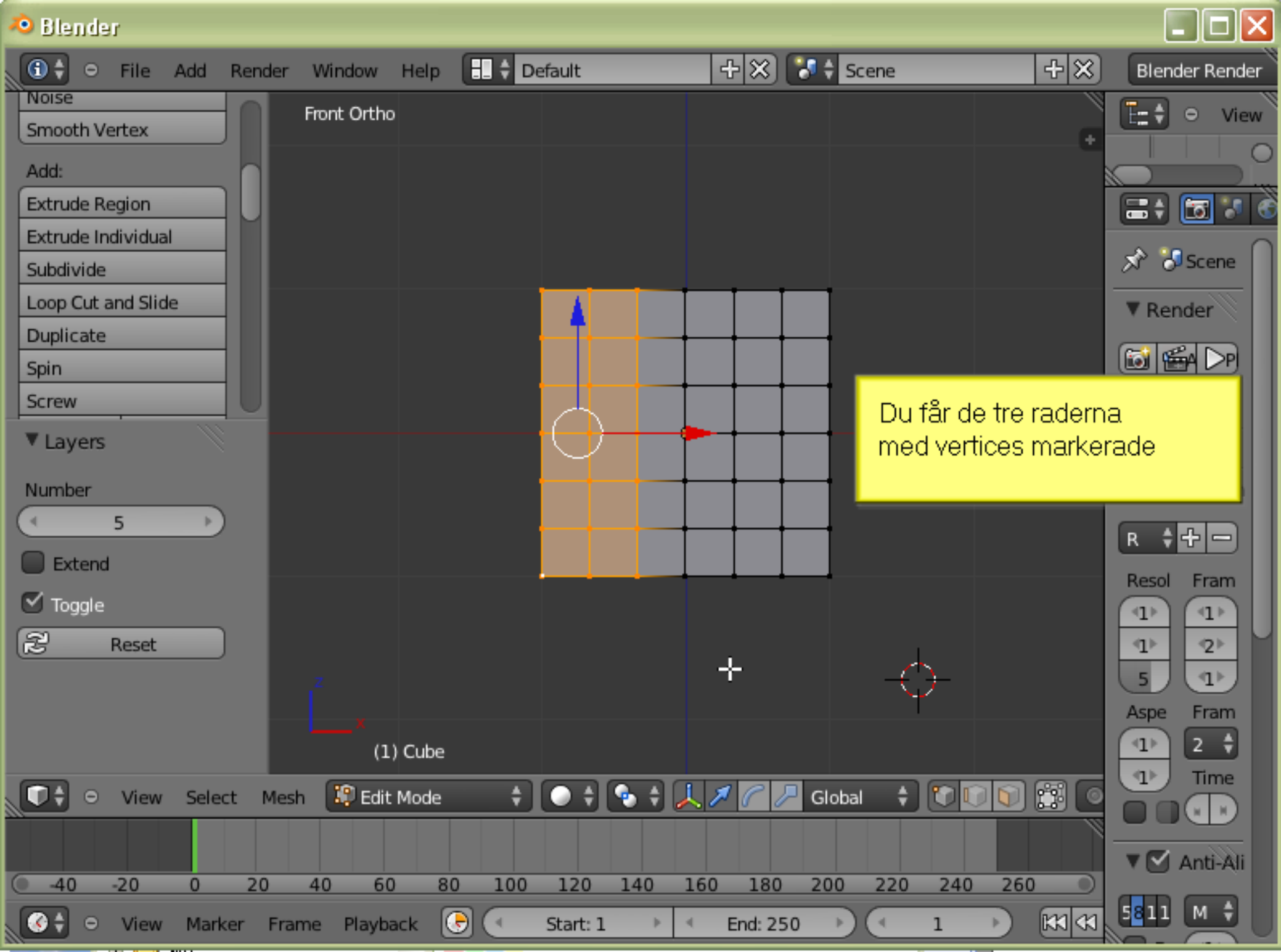
Högerklicka ett vertex
för att avmarkera alla andra



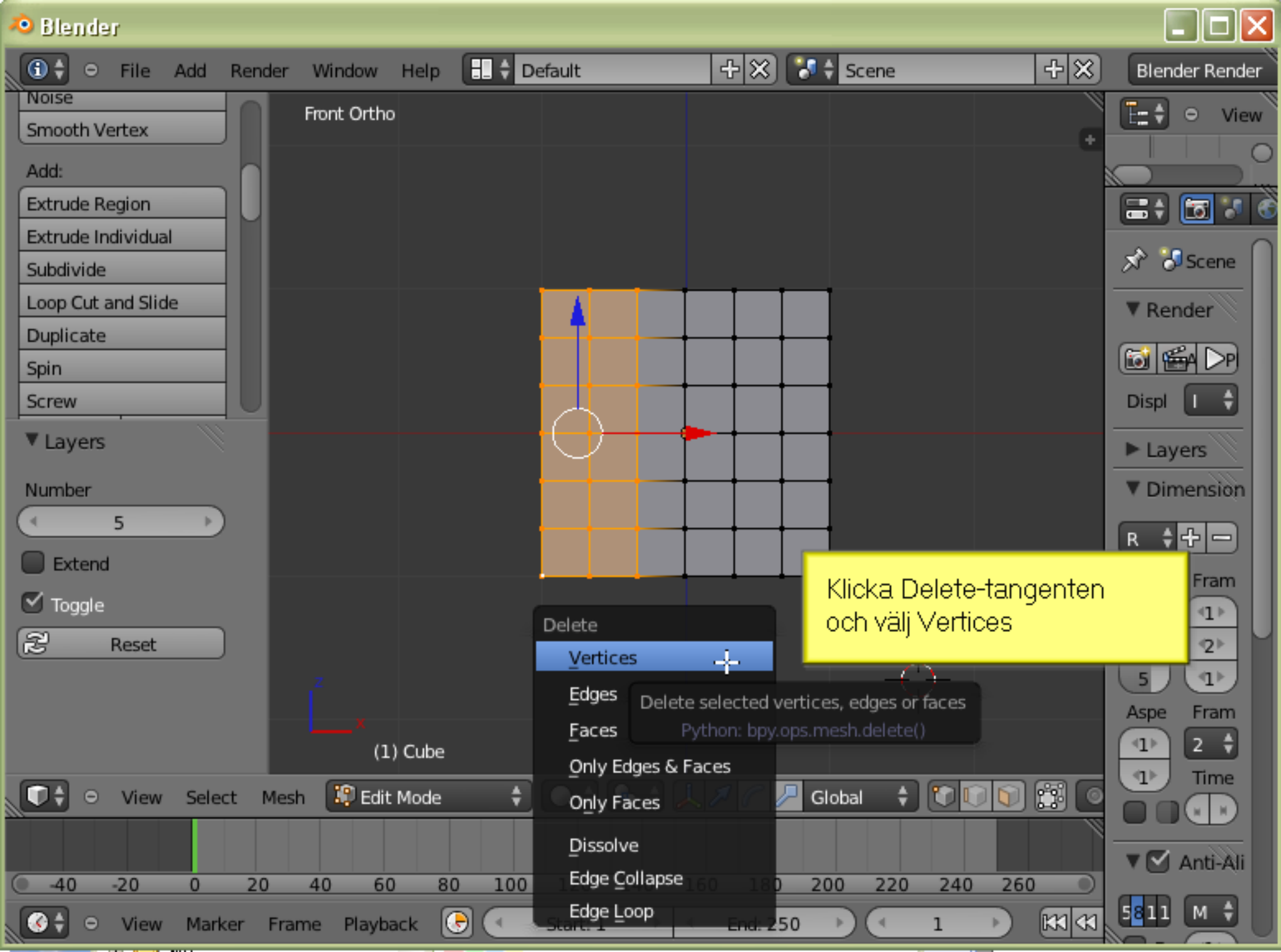
B-tangenten ger border select och du kan välja ett antal hörnpunkter - vertices genom att dra upp en rektangel.



Och dra ut rektangeln
så den täcker in
tre rader med vertices.

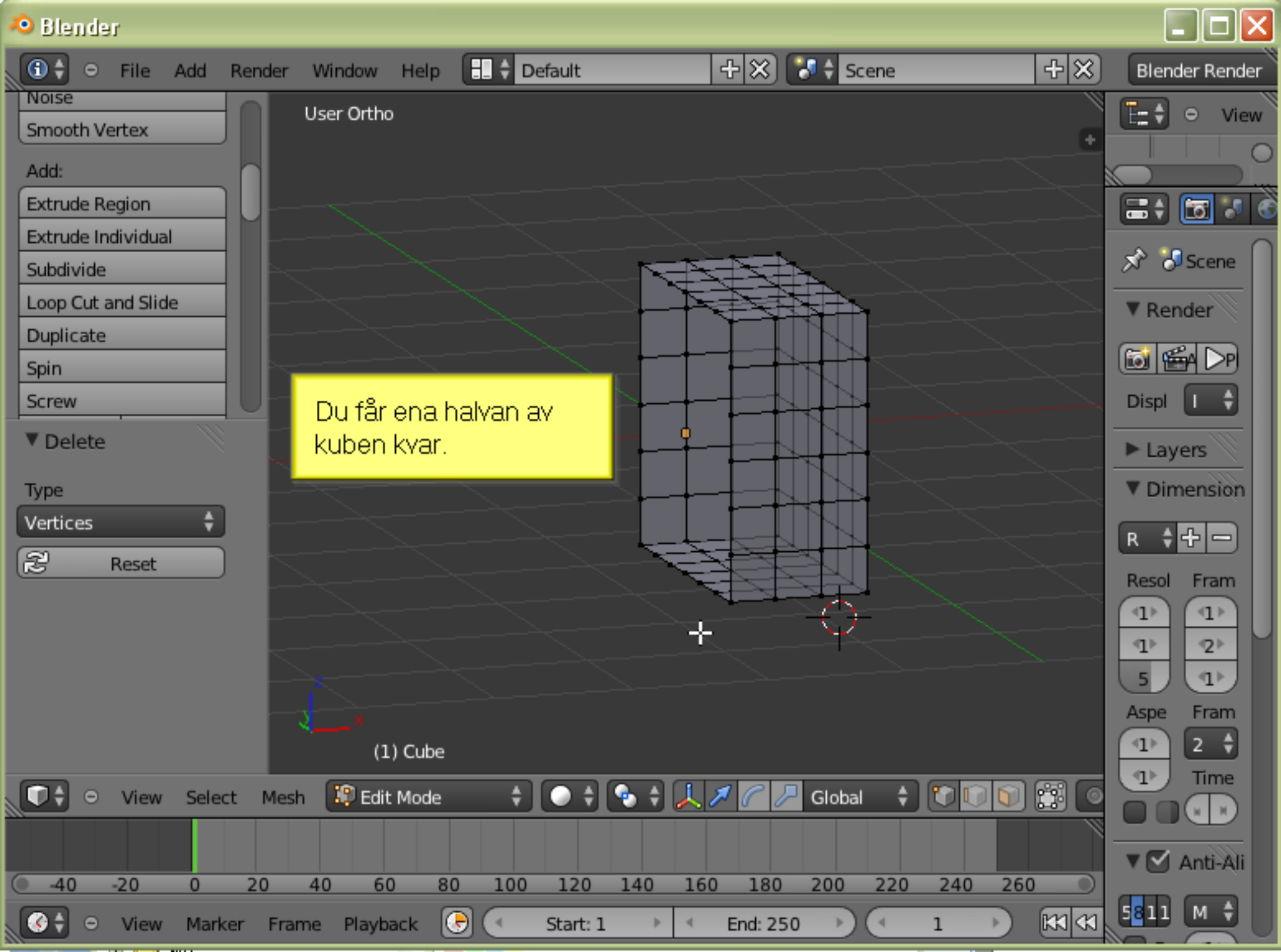


Du får de tre raderna
med vertices markerade



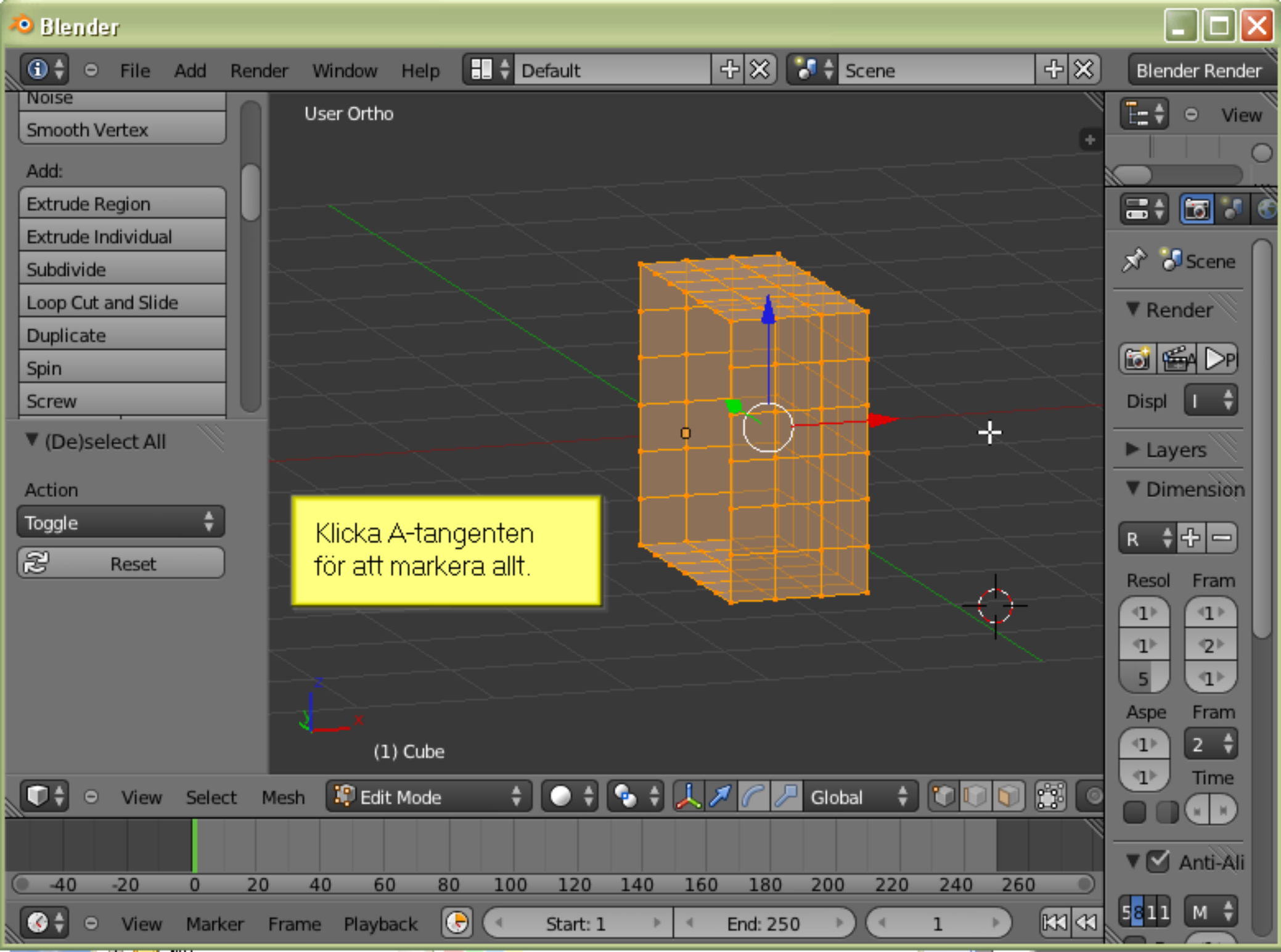
Klicka Delete-tangenten
och välj Vertices

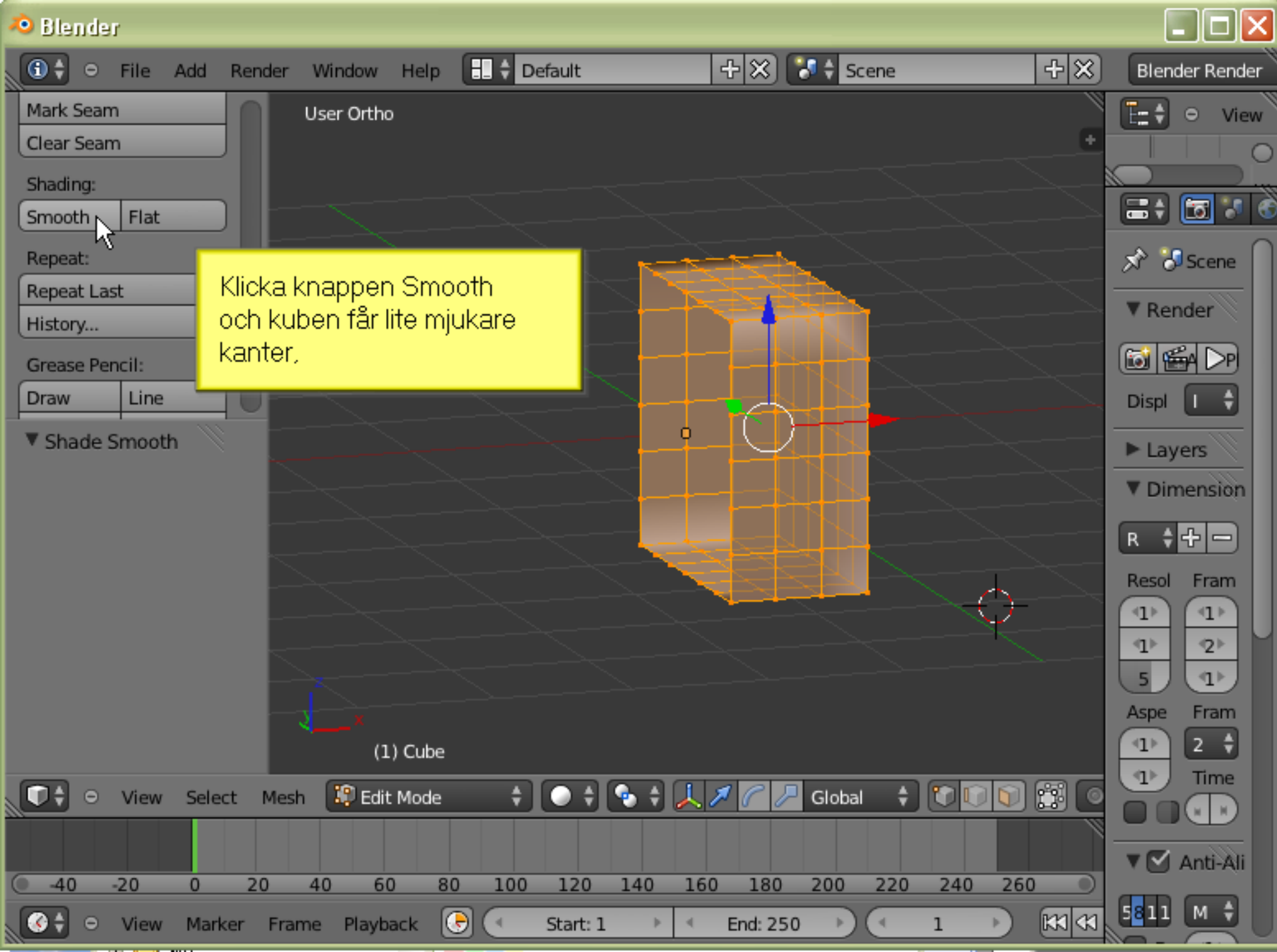
- Delete
 - Vertices** +
 - Edges
 - Faces
 - Only Edges & Faces
 - Only Faces
 - Dissolve
 - Edge Collapse
 - Edge Loop
- Python: bpy.ops.mesh.delete()

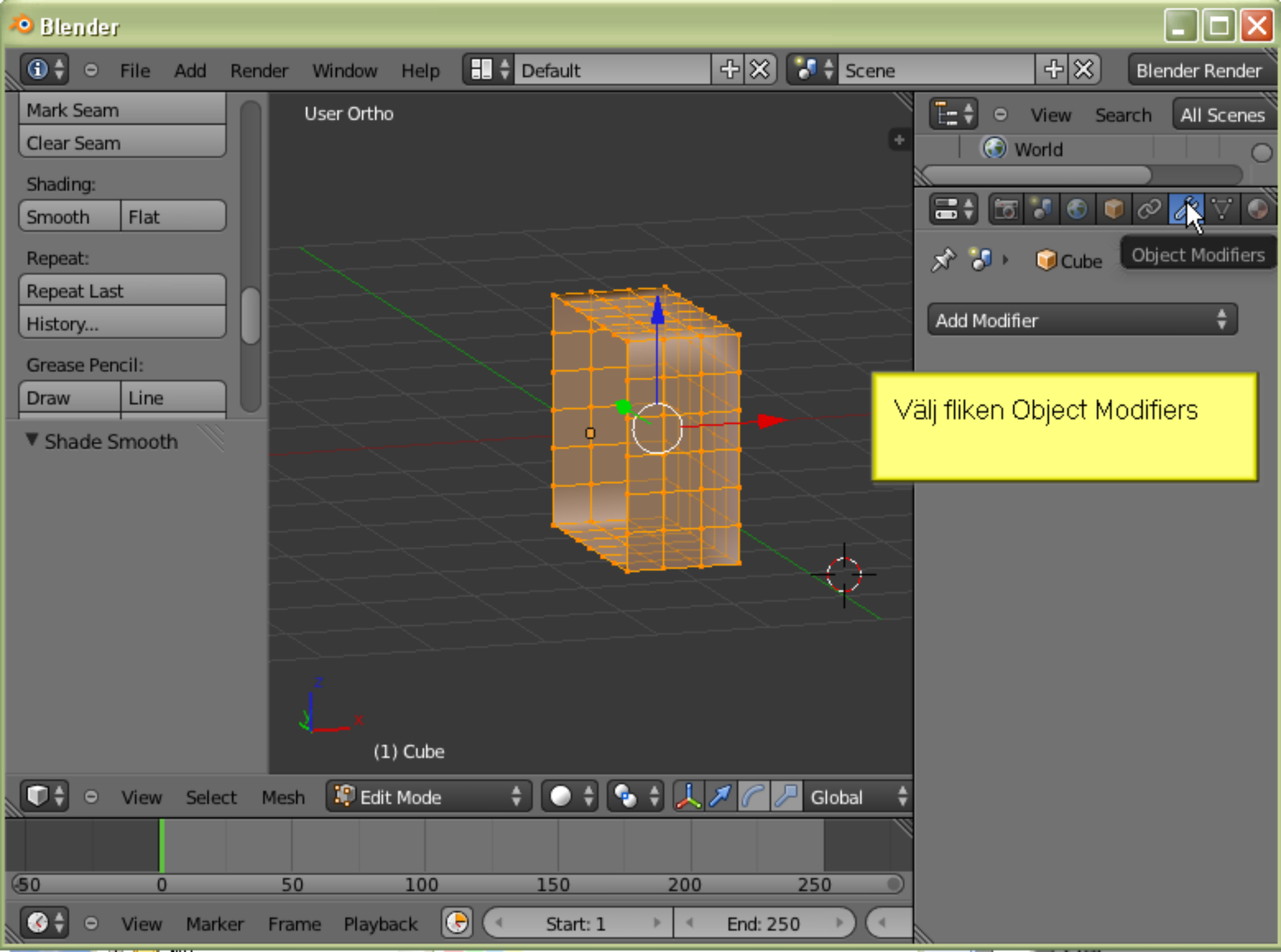


Du får ena halvan av kuben kvar.

(1) Cube







Mark Seam
Clear Seam

Shading:
Smooth Flat

Repeat:
Repeat Last
History...

Grease Pencil:
Draw Line

▼ Shade Smooth

User Ortho

View Search All Scenes

World

Object Modifiers

Cube

Add Modifier

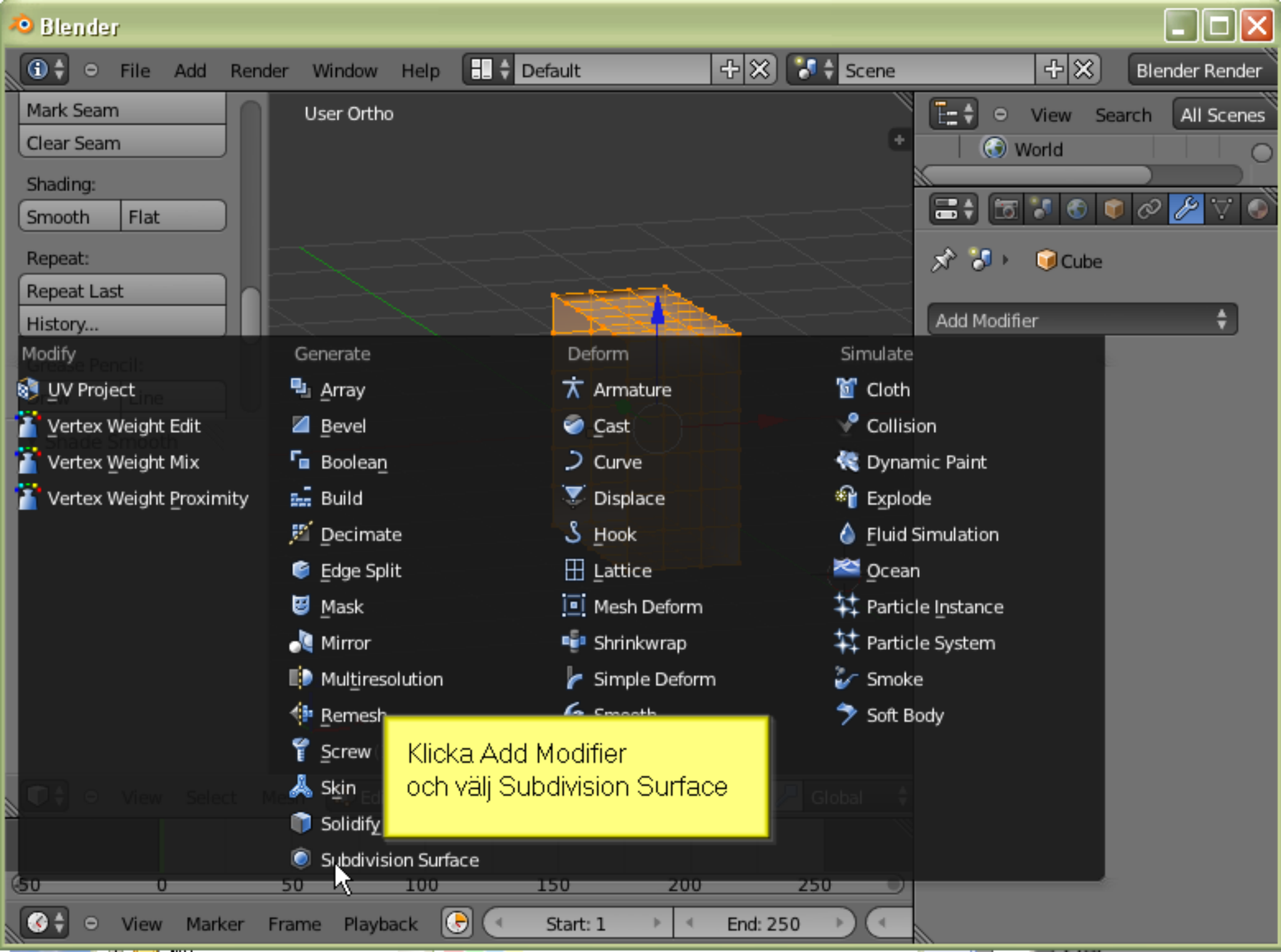
Välj fliken Object Modifiers

(1) Cube

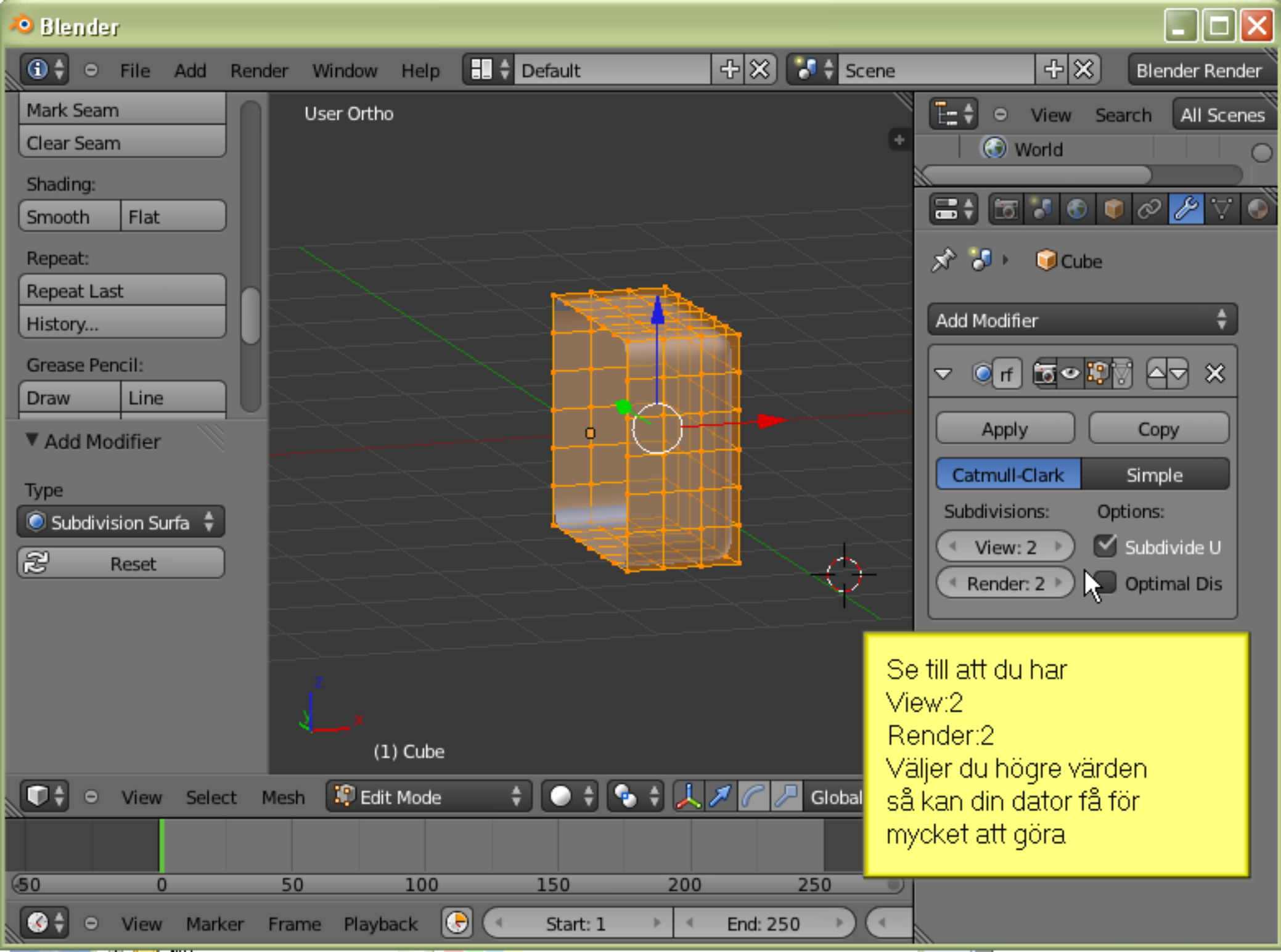
View Select Mesh Edit Mode Global

50 0 50 100 150 200 250

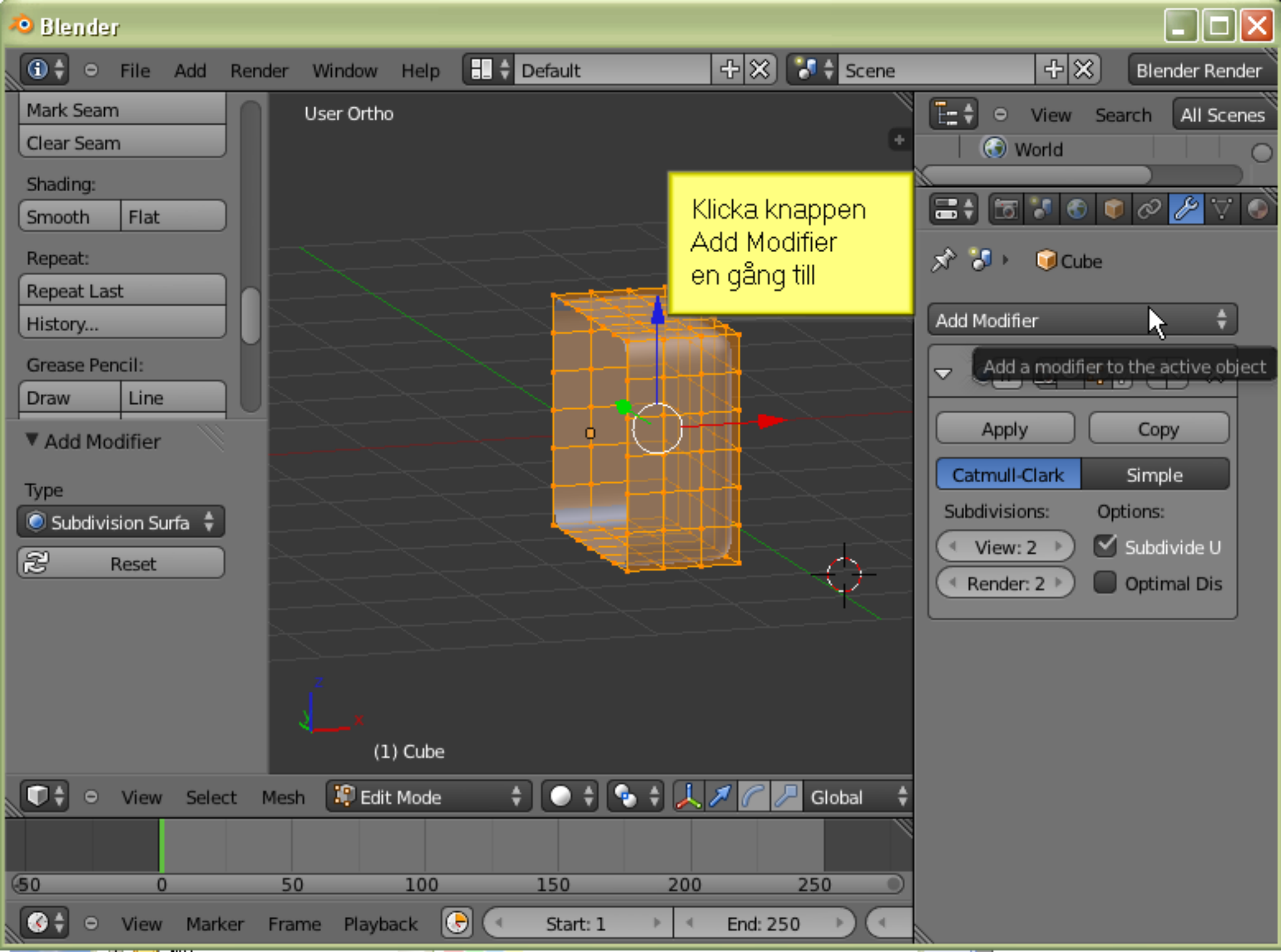
View Marker Frame Playback Start: 1 End: 250



Klicka Add Modifier
och välj Subdivision Surface



Se till att du har
View:2
Render:2
Väljer du högre värden
så kan din dator få för
mycket att göra



File

Add

Render

Window

Help



Default



Scene



Blender Render

Mark Seam

Clear Seam

Shading:

Smooth

Flat

Repeat:

Repeat Last

History...

Grease Pencil:

Draw

Line

▼ Add Modifier

Type

Subdivision Surfa



Reset

User Ortho

Klicka knappen
Add Modifier
en gång till



View

Search

All Scenes



World



Cube

Add Modifier

Add a modifier to the active object

Apply

Copy

Catmull-Clark

Simple

Subdivisions:

Options:

View: 2

☒ Subdivide U

Render: 2

☐ Optimal Dis

View

Select

Mesh



Edit Mode



Global



View

Marker

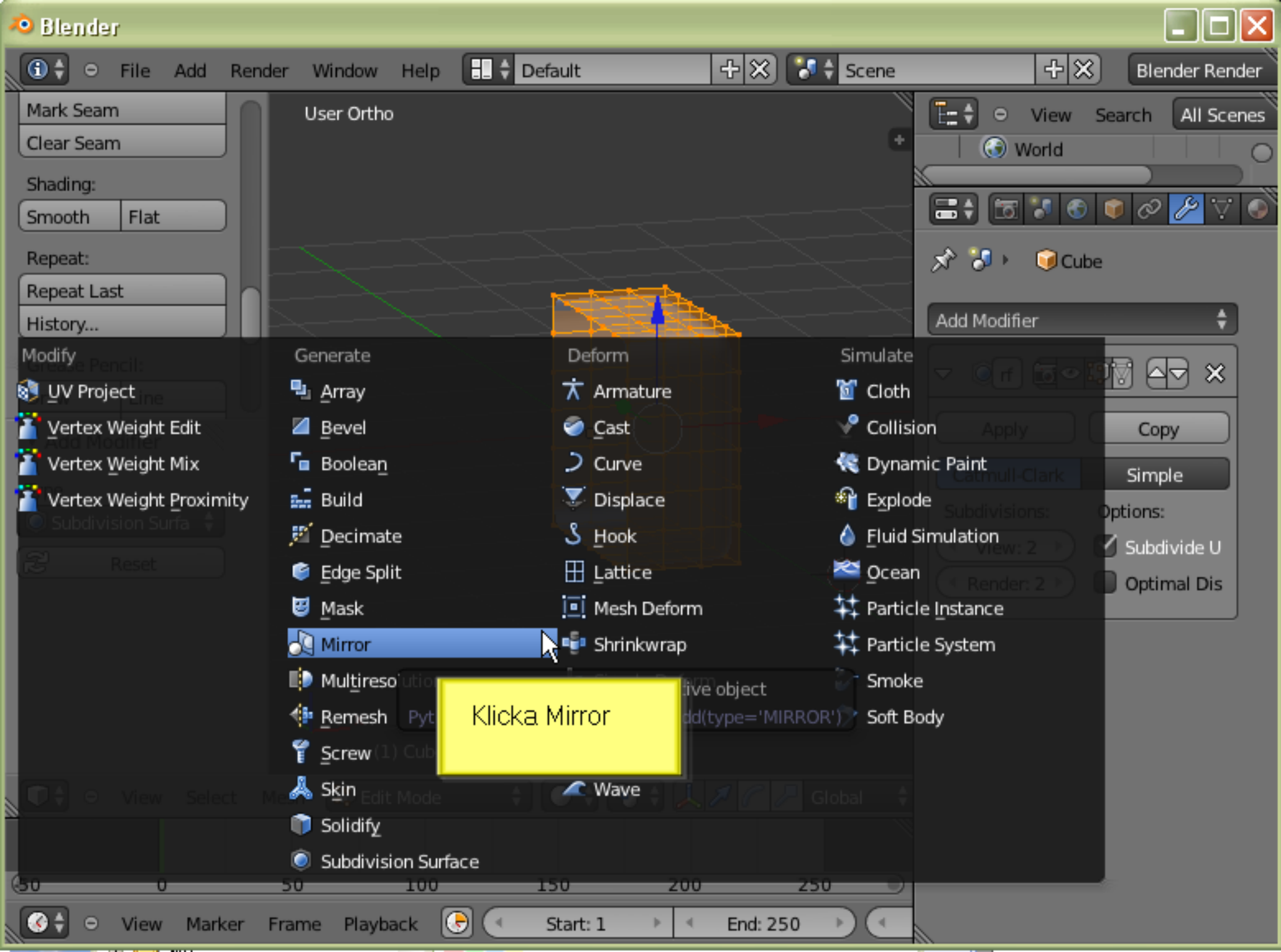
Frame

Playback

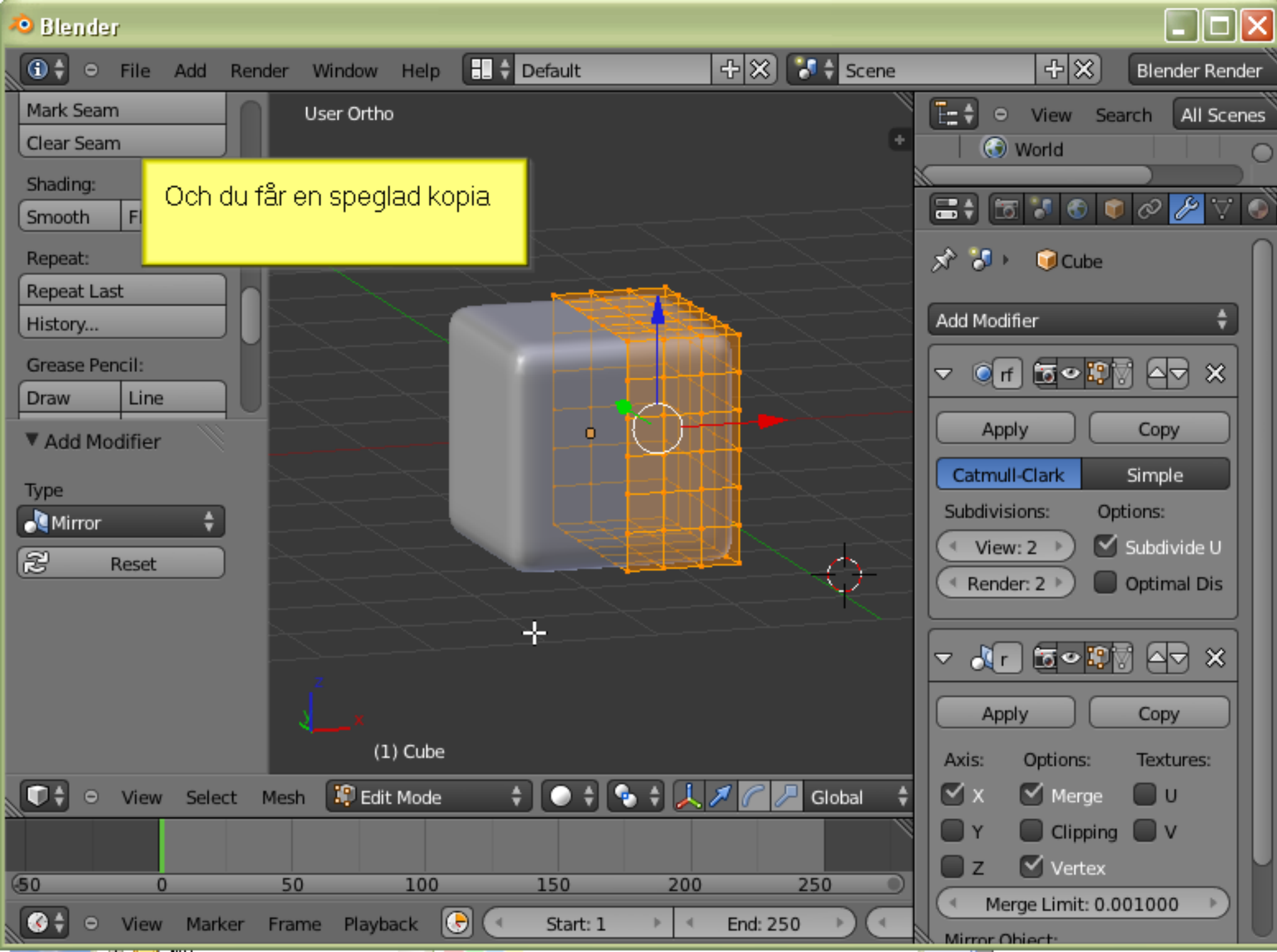


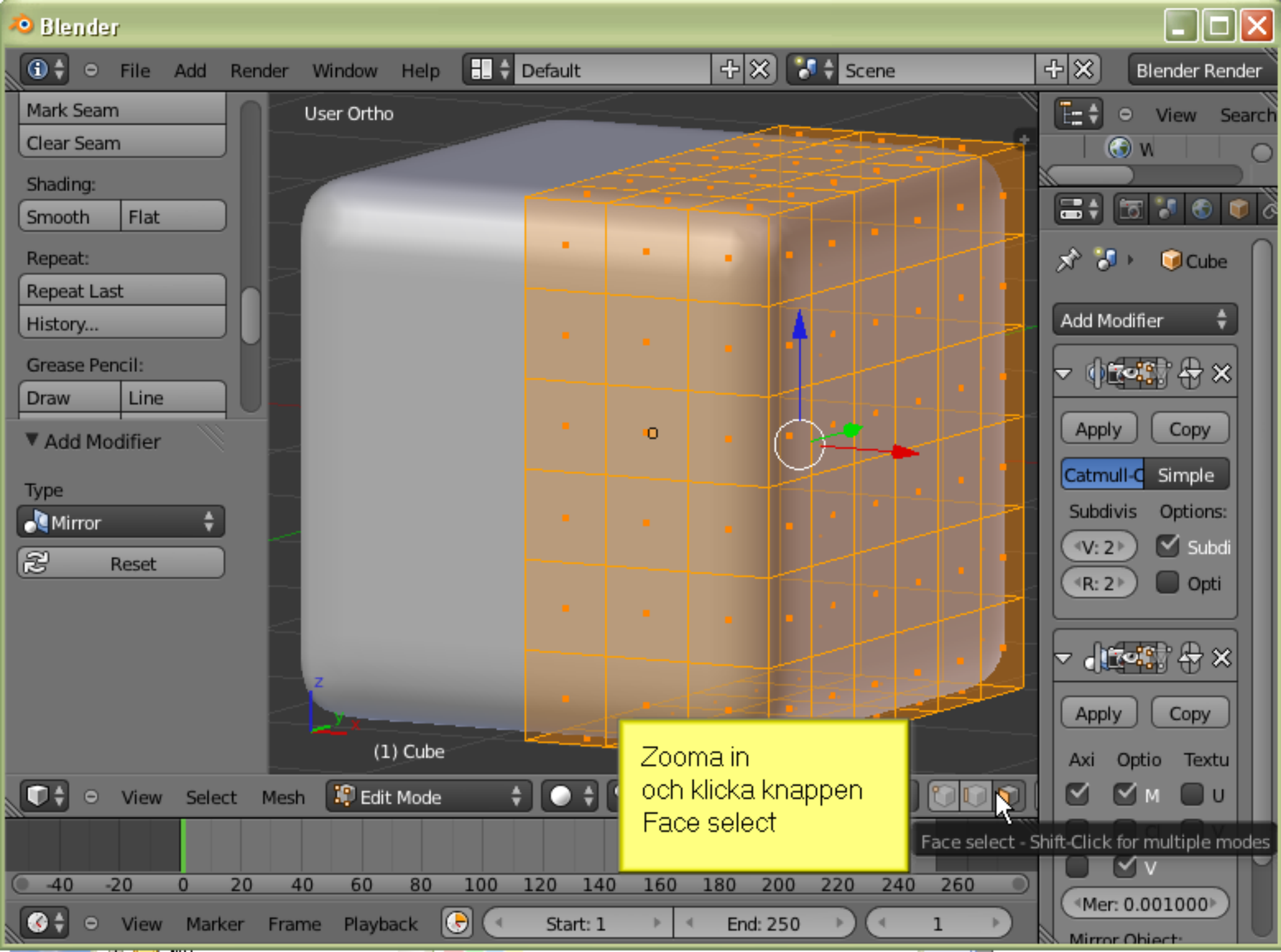
Start: 1

End: 250



Klicka Mirror





Mark Seam

Clear Seam

Shading:

Smooth

Flat

Repeat:

Repeat Last

History...

Grease Pencil:

Draw

Line

▼ Add Modifier

Type

Mirror

Reset

User Ortho

(1) Cube

Zooma in
och klicka knappen
Face select

Face select - Shift-Click for multiple modes

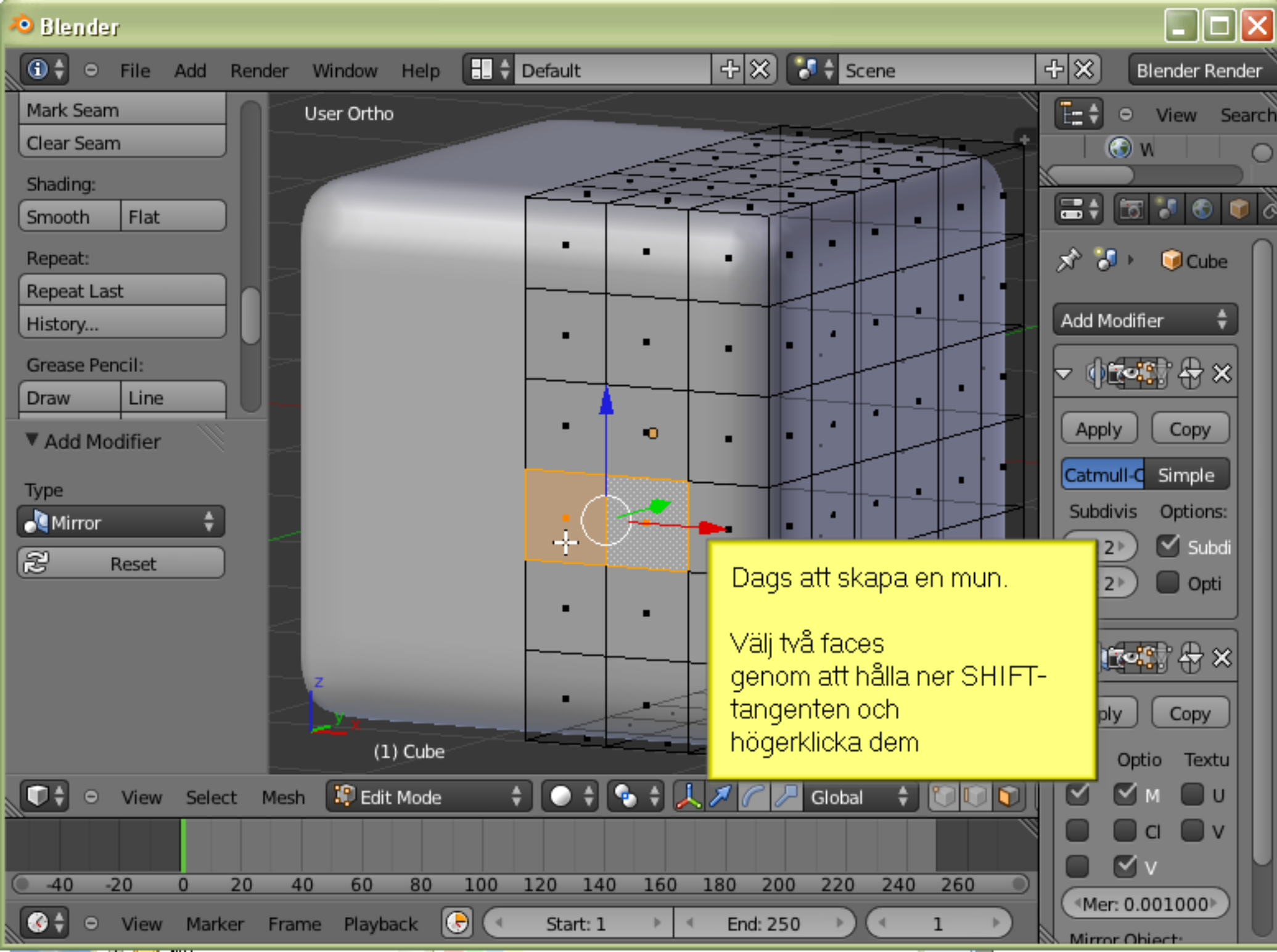
Start: 1

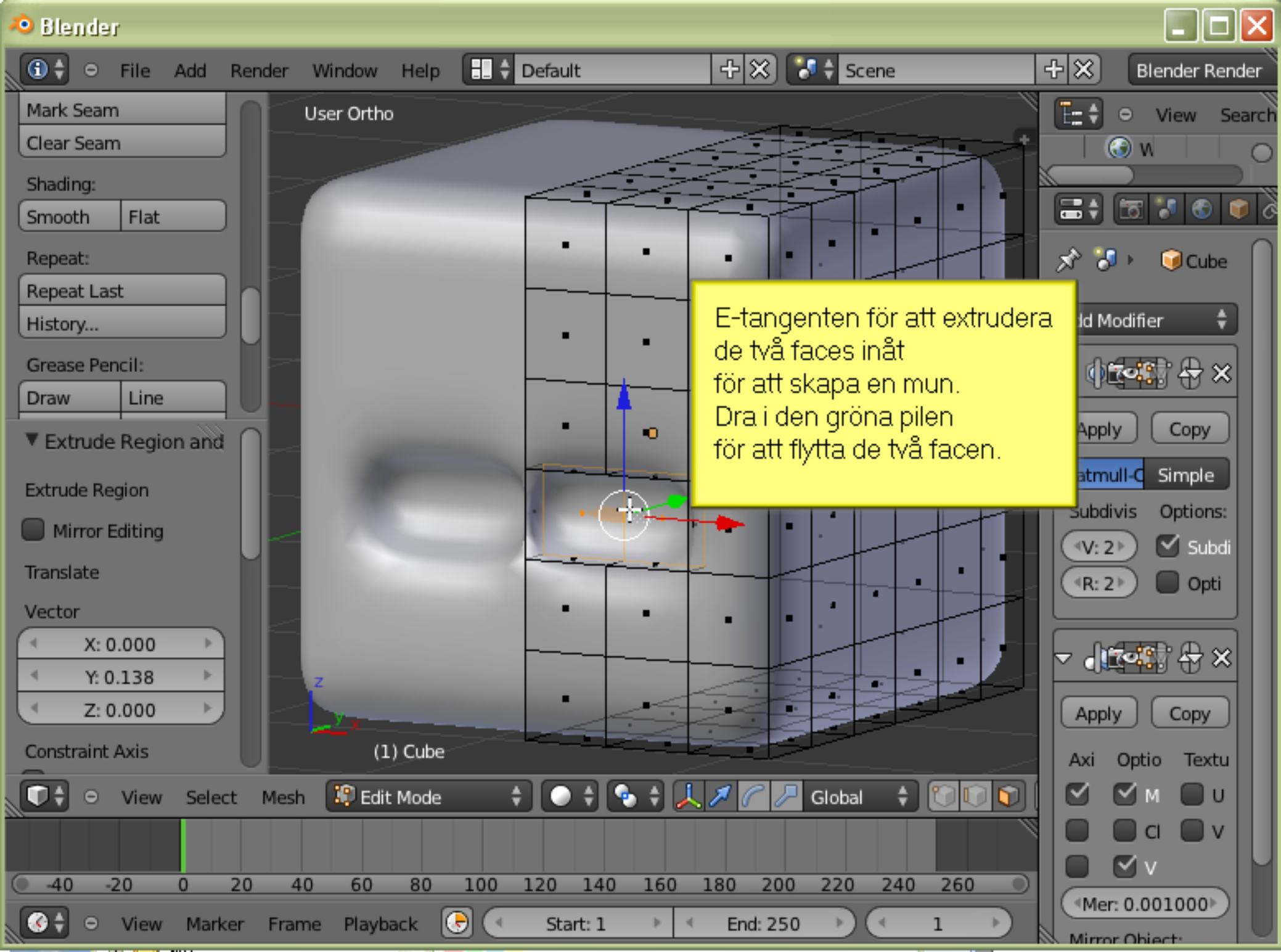
End: 250

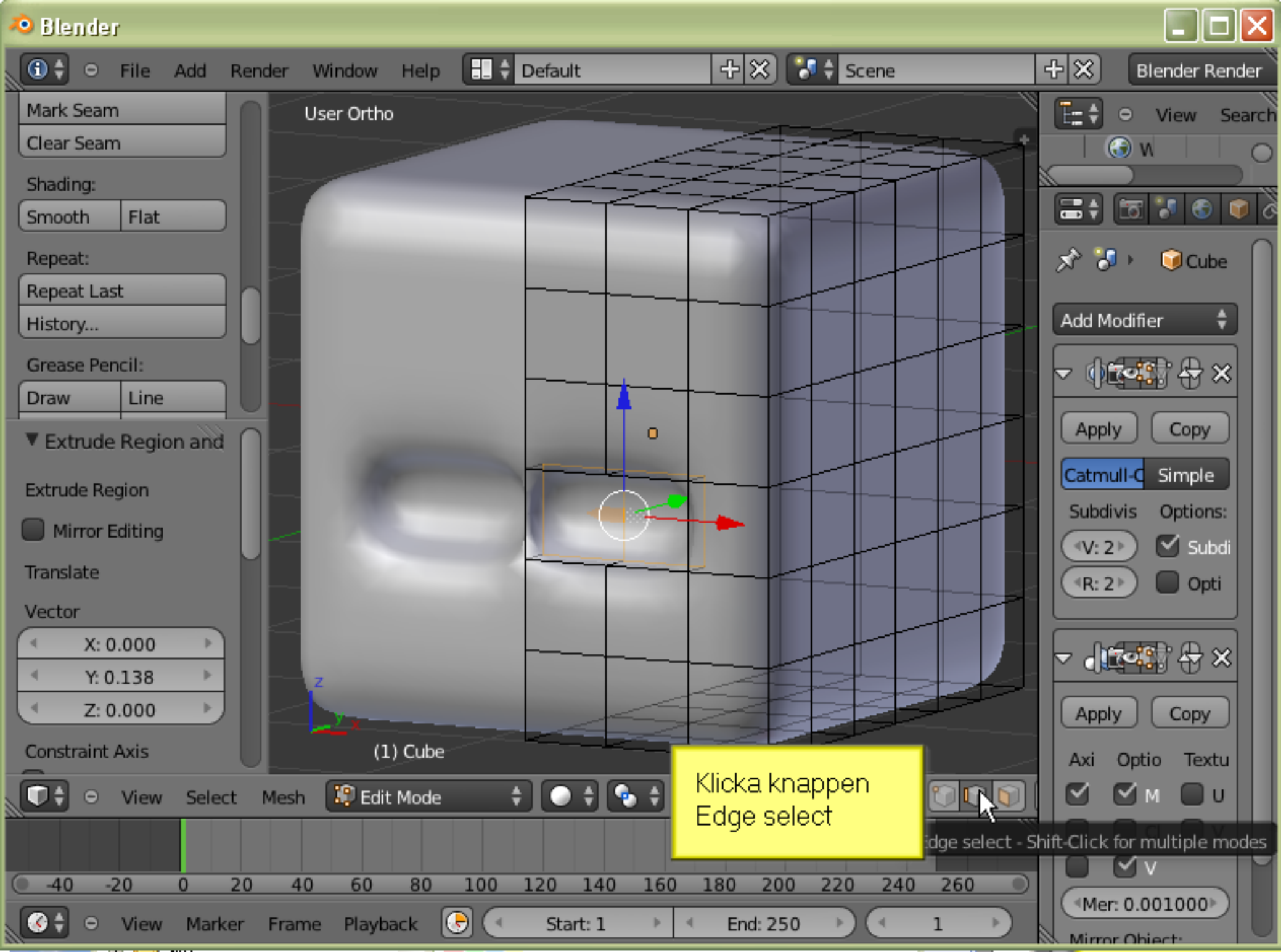
1

Mer: 0.001000

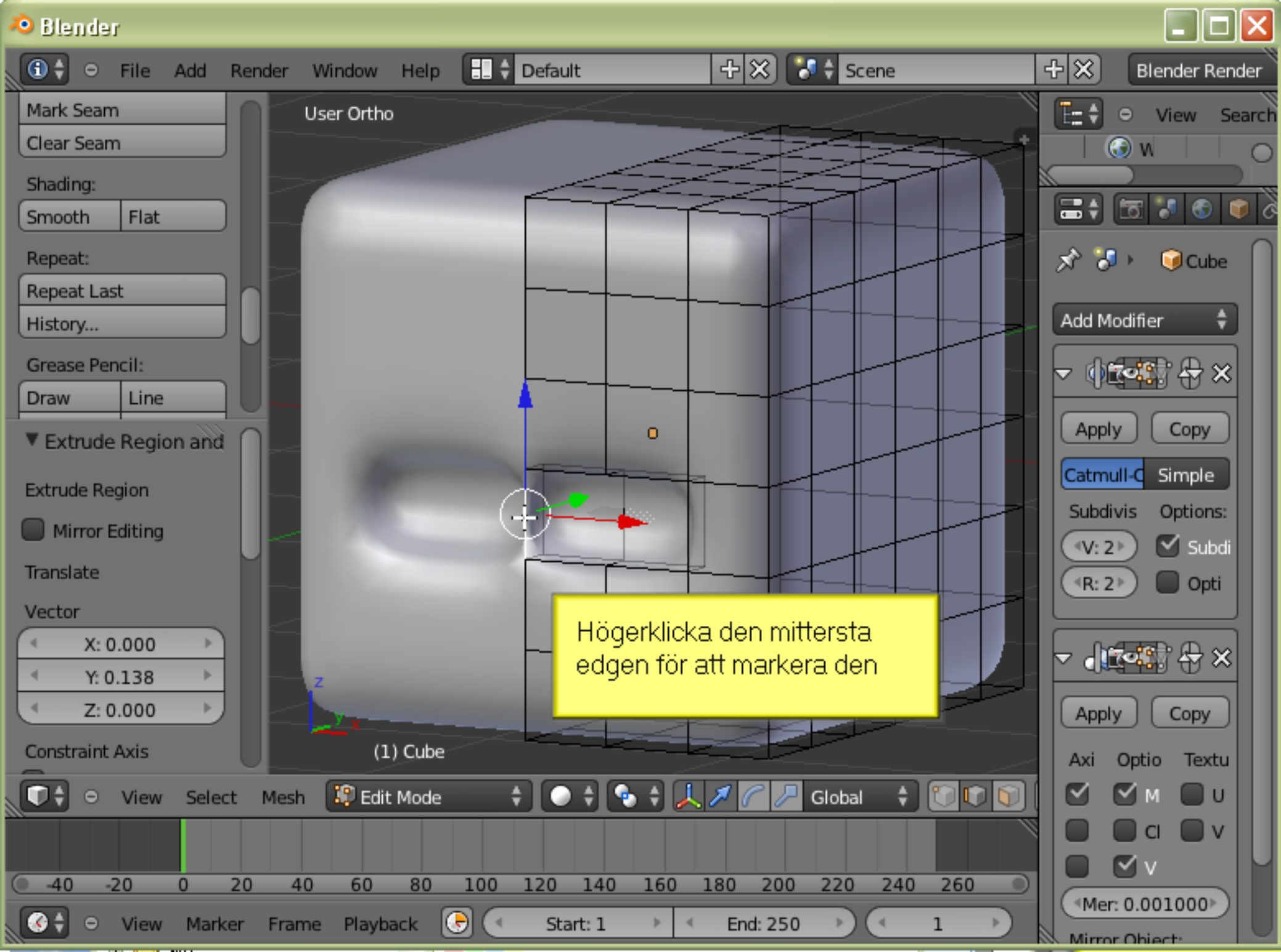
Mirror Object:

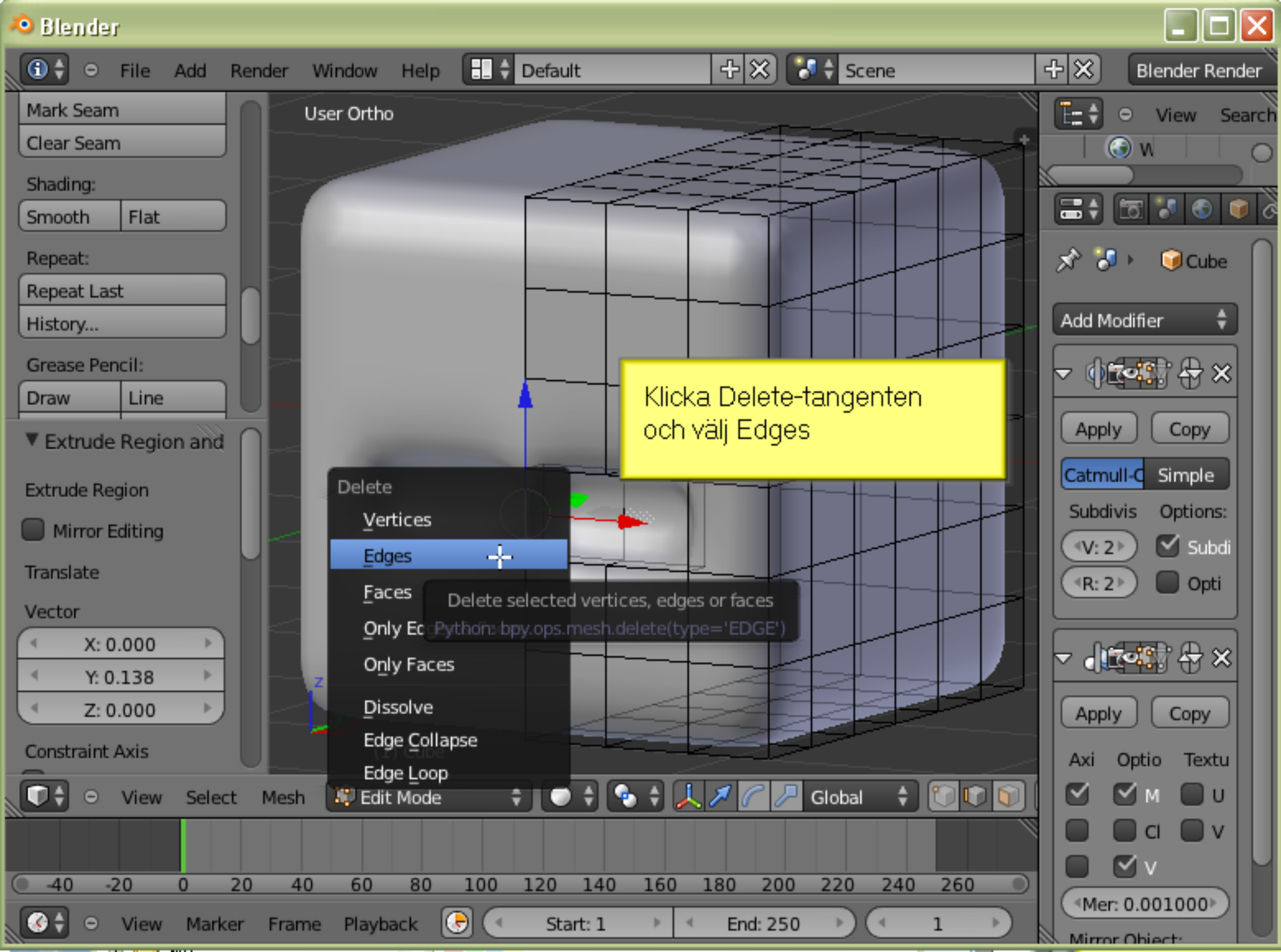


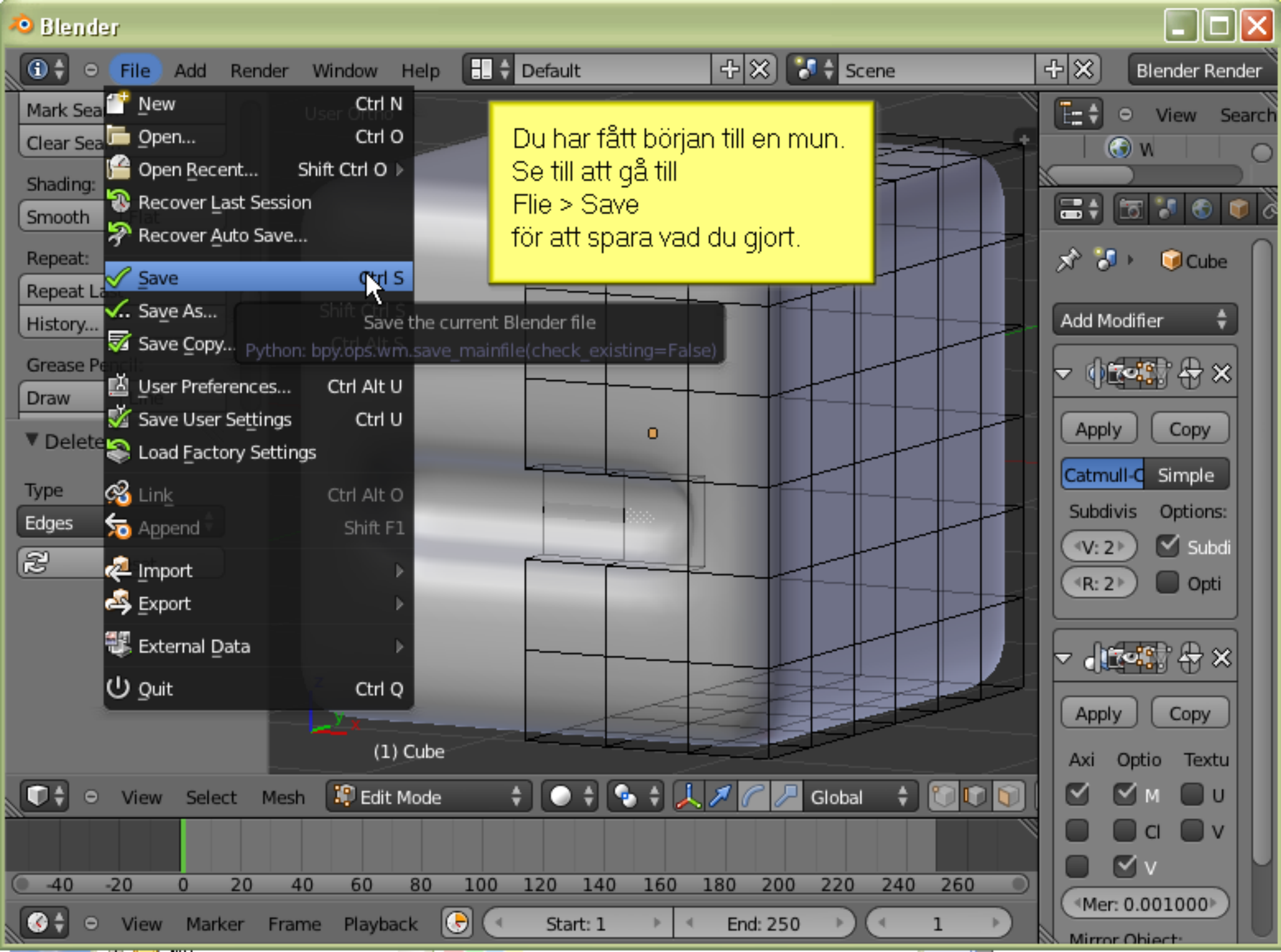




Klicka knappen
Edge select

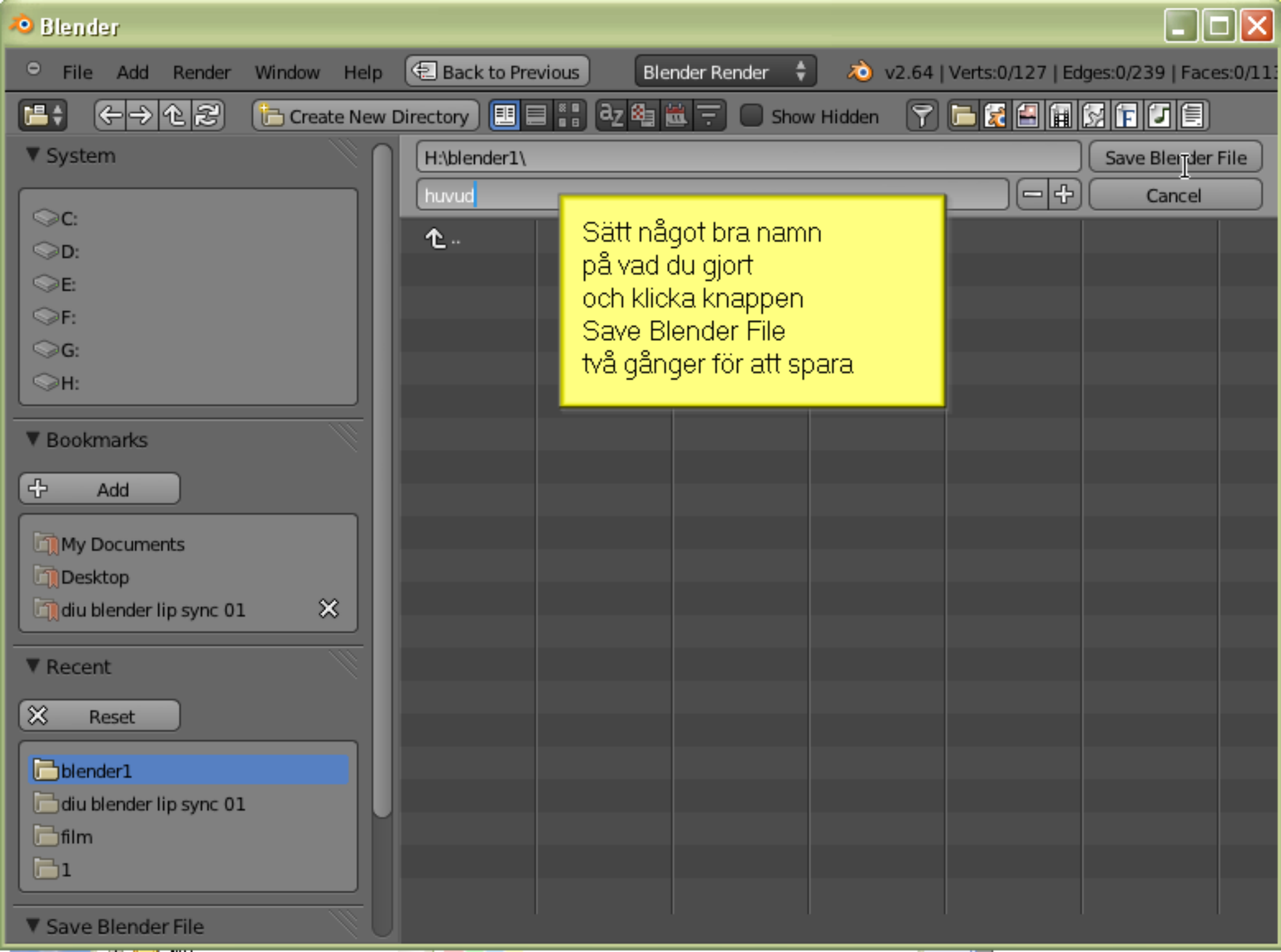


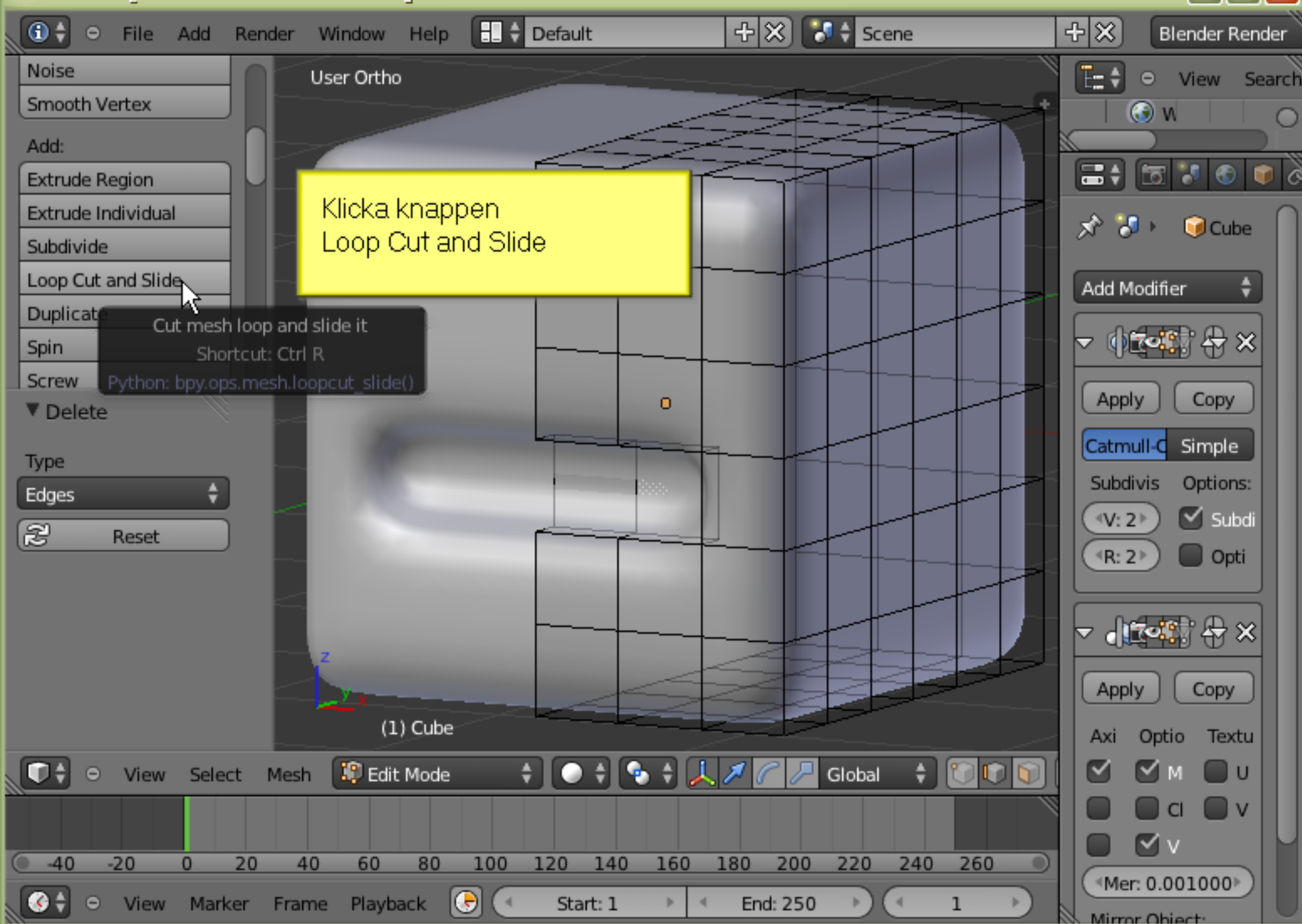


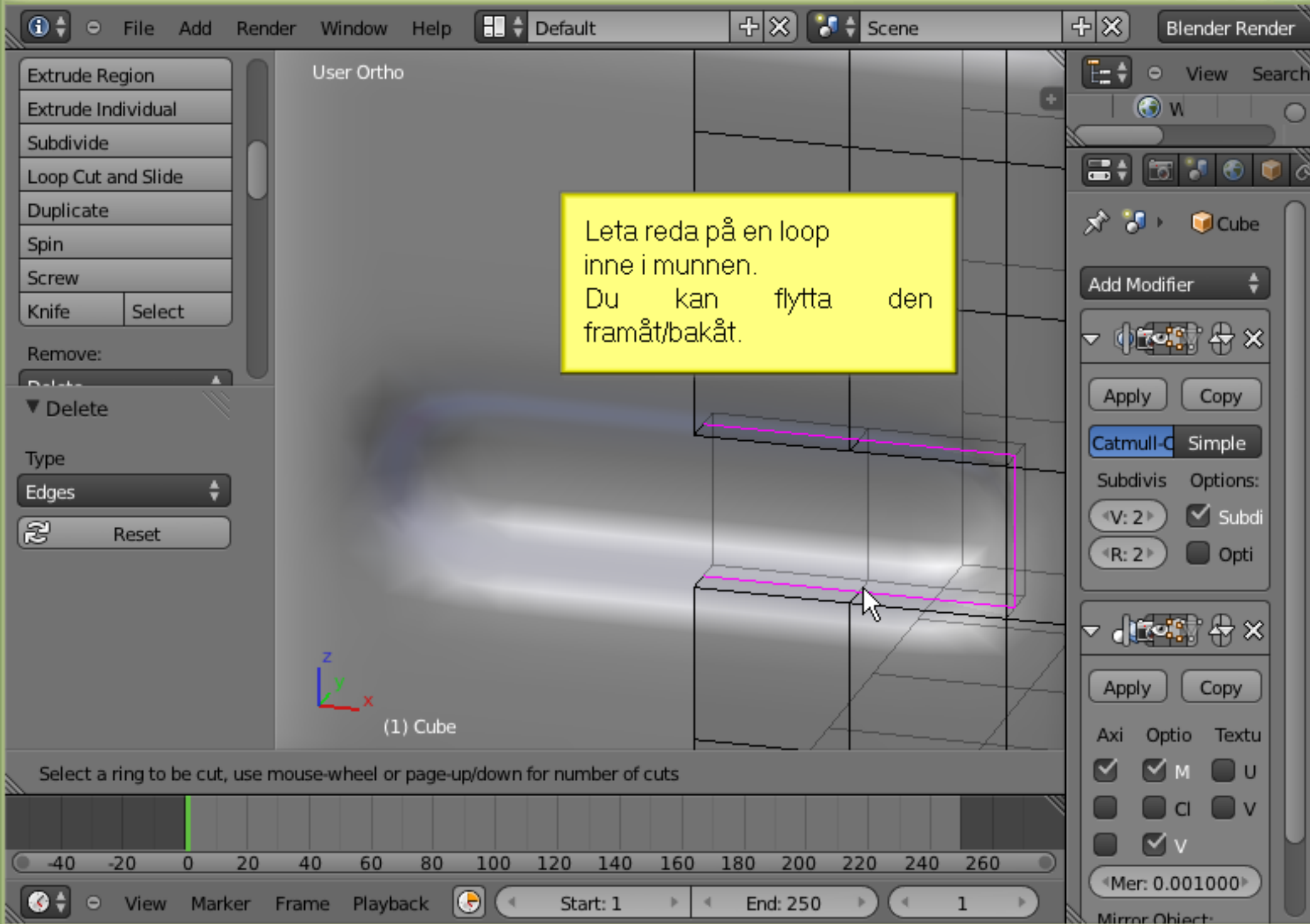


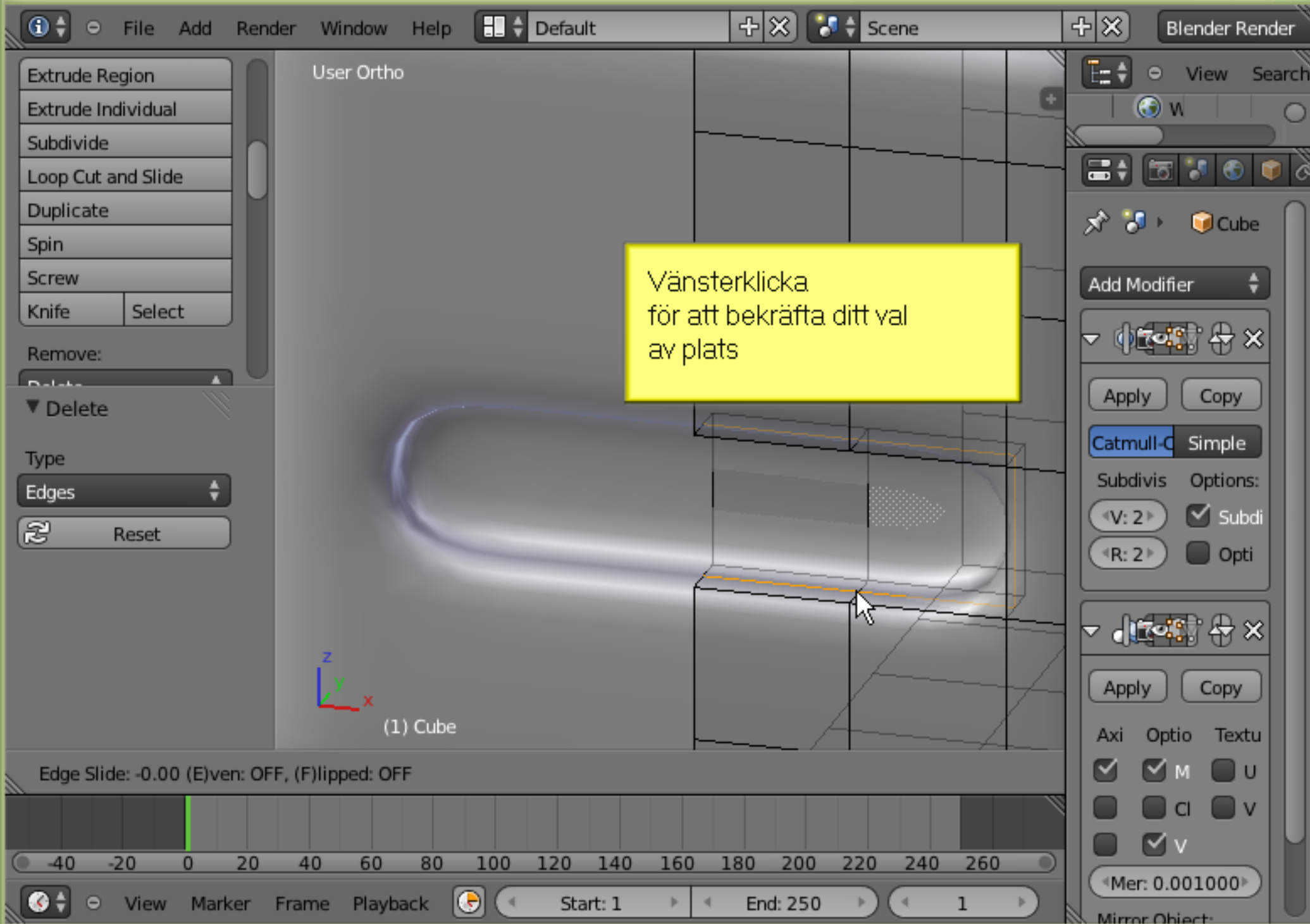
Du har fått början till en mun.
Se till att gå till
Flie > Save
för att spara vad du gjort.

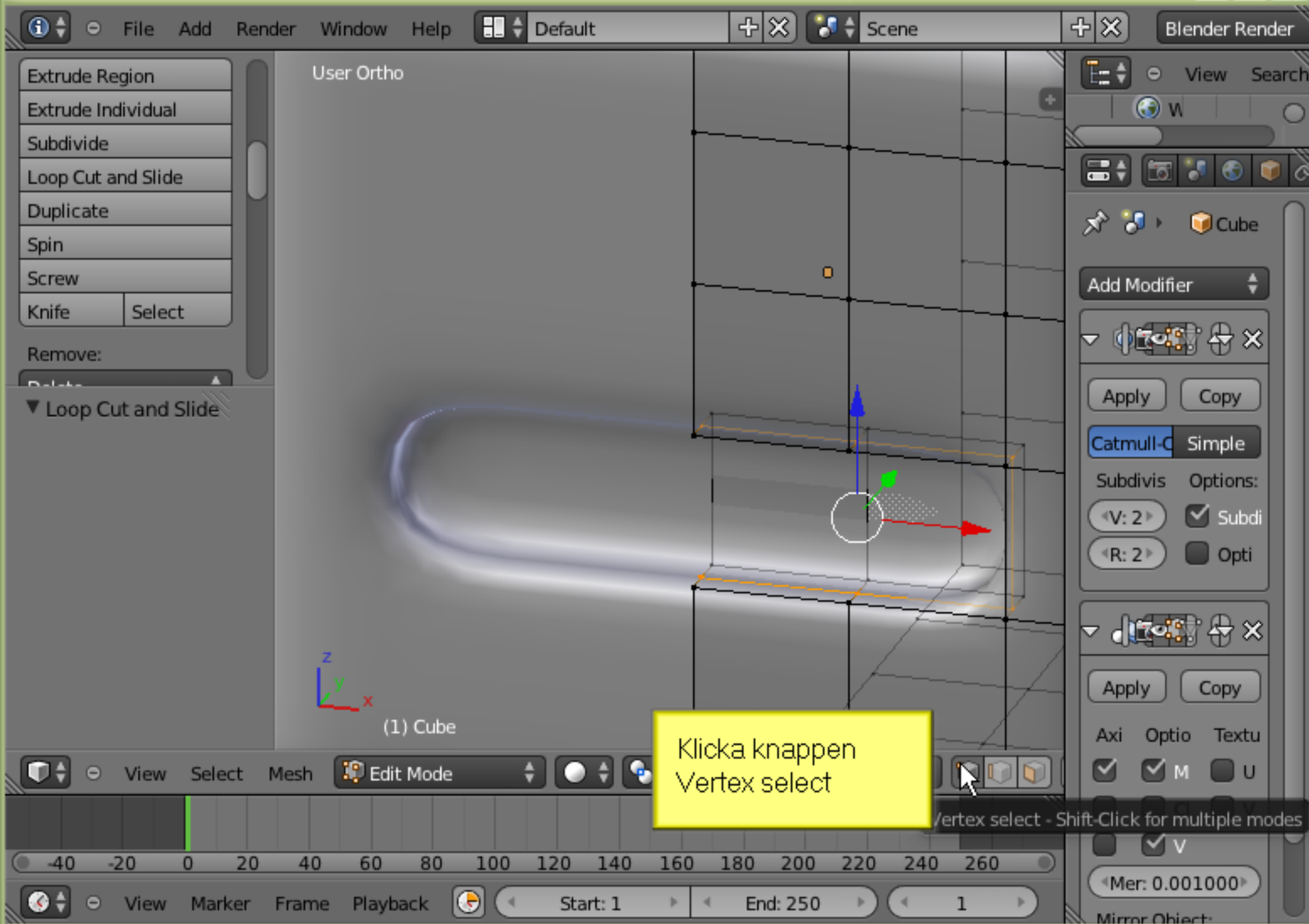
Save the current Blender file
Python: bpy.ops.wm.save_mainfile(check_existing=False)

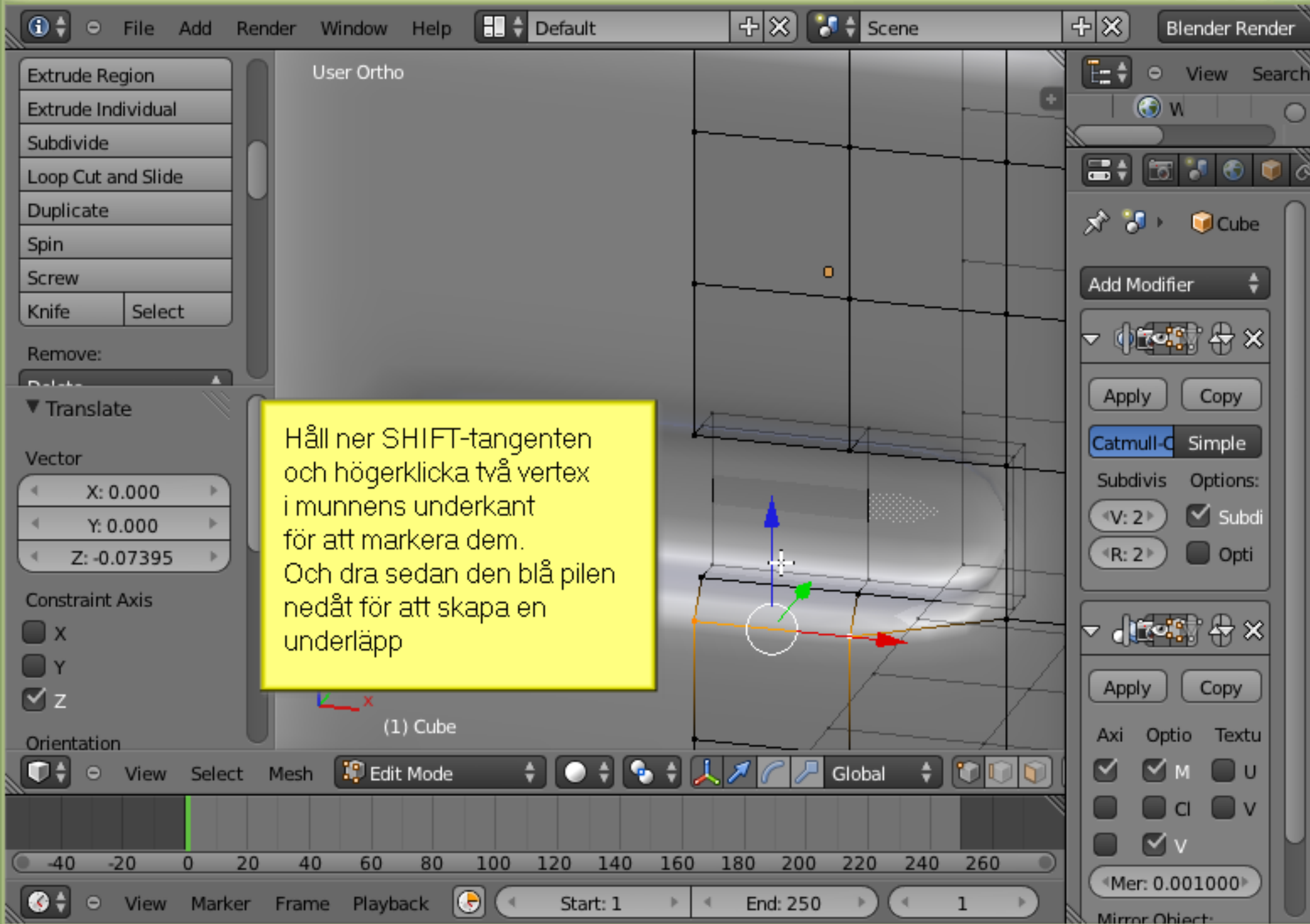


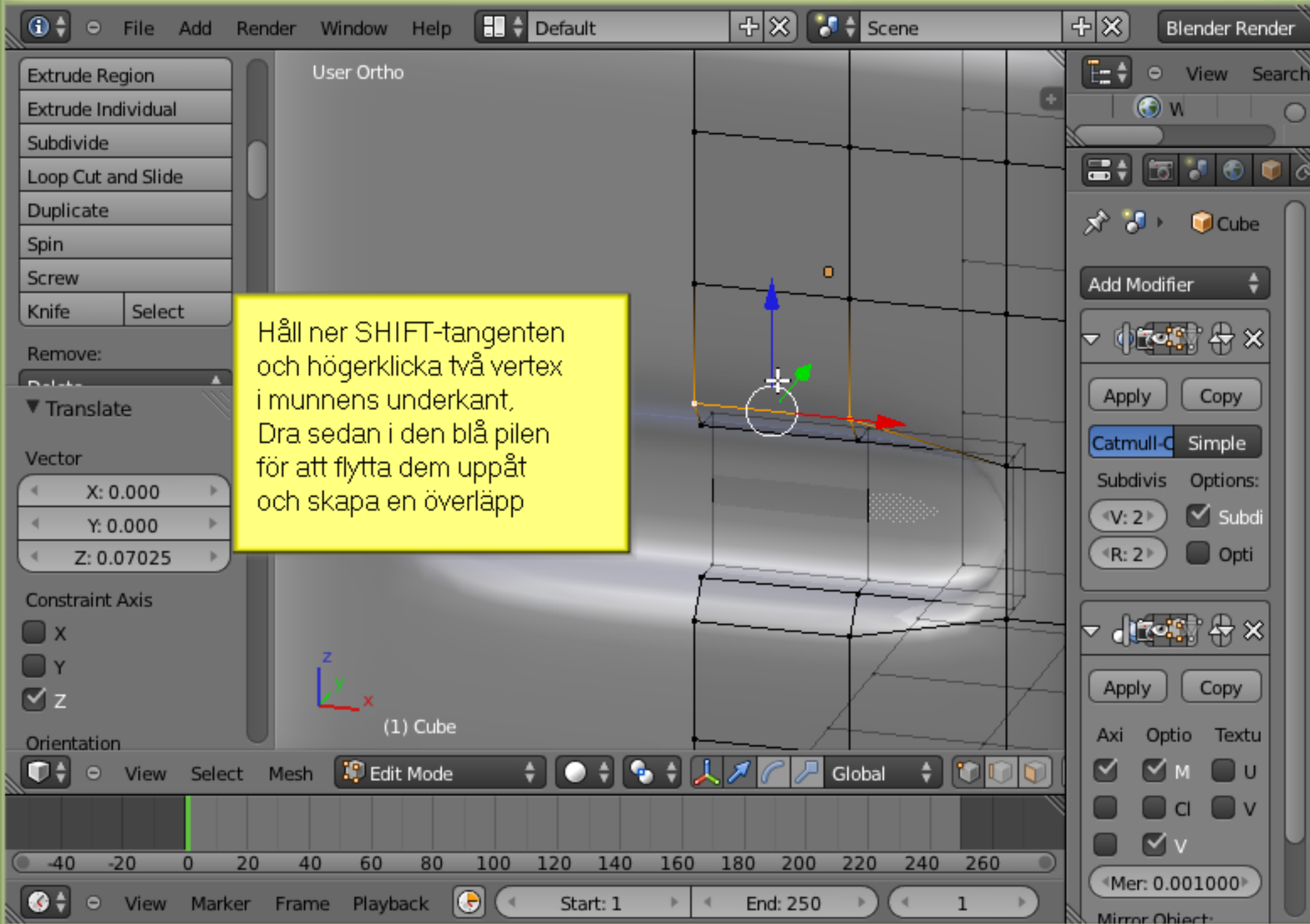


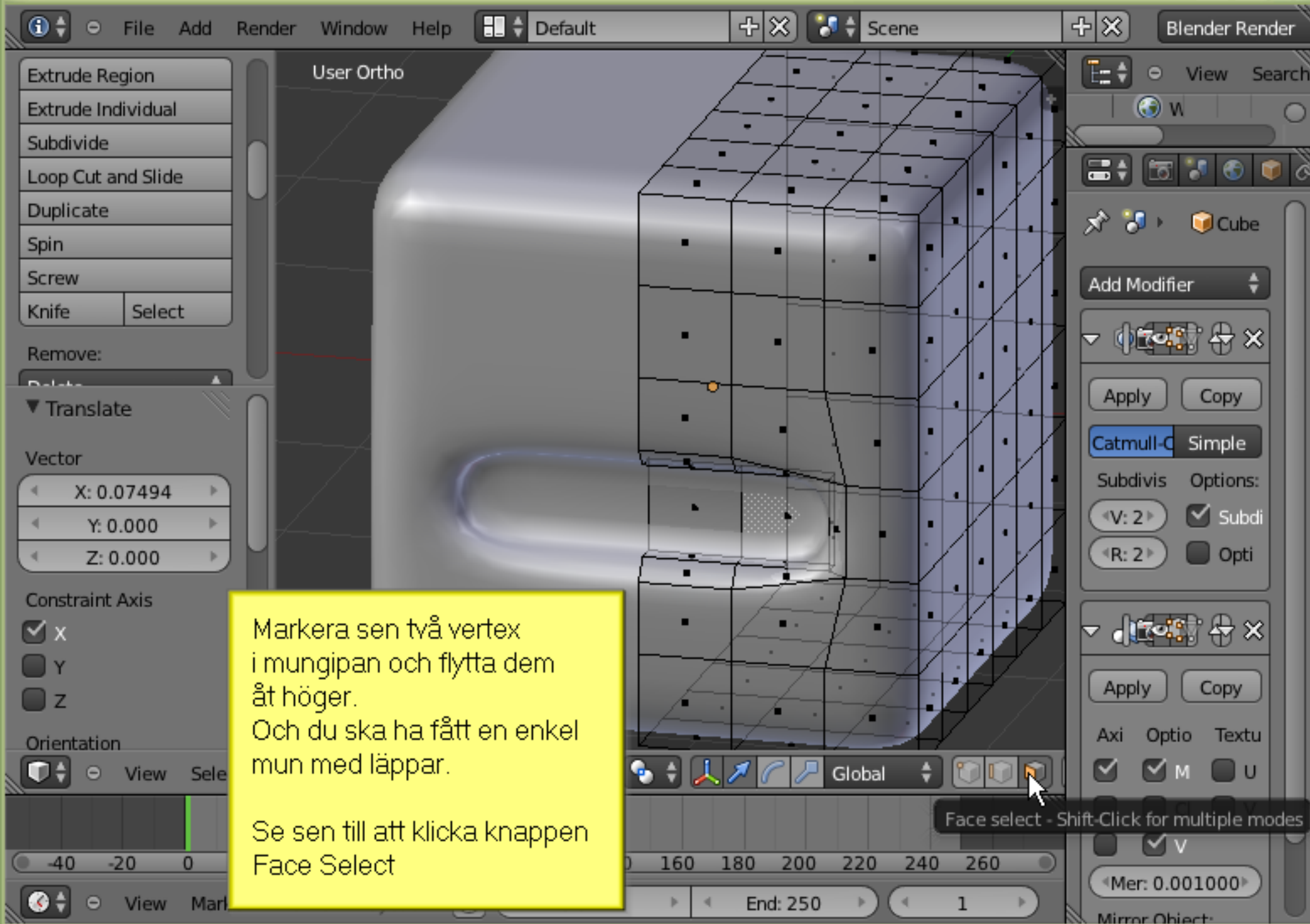


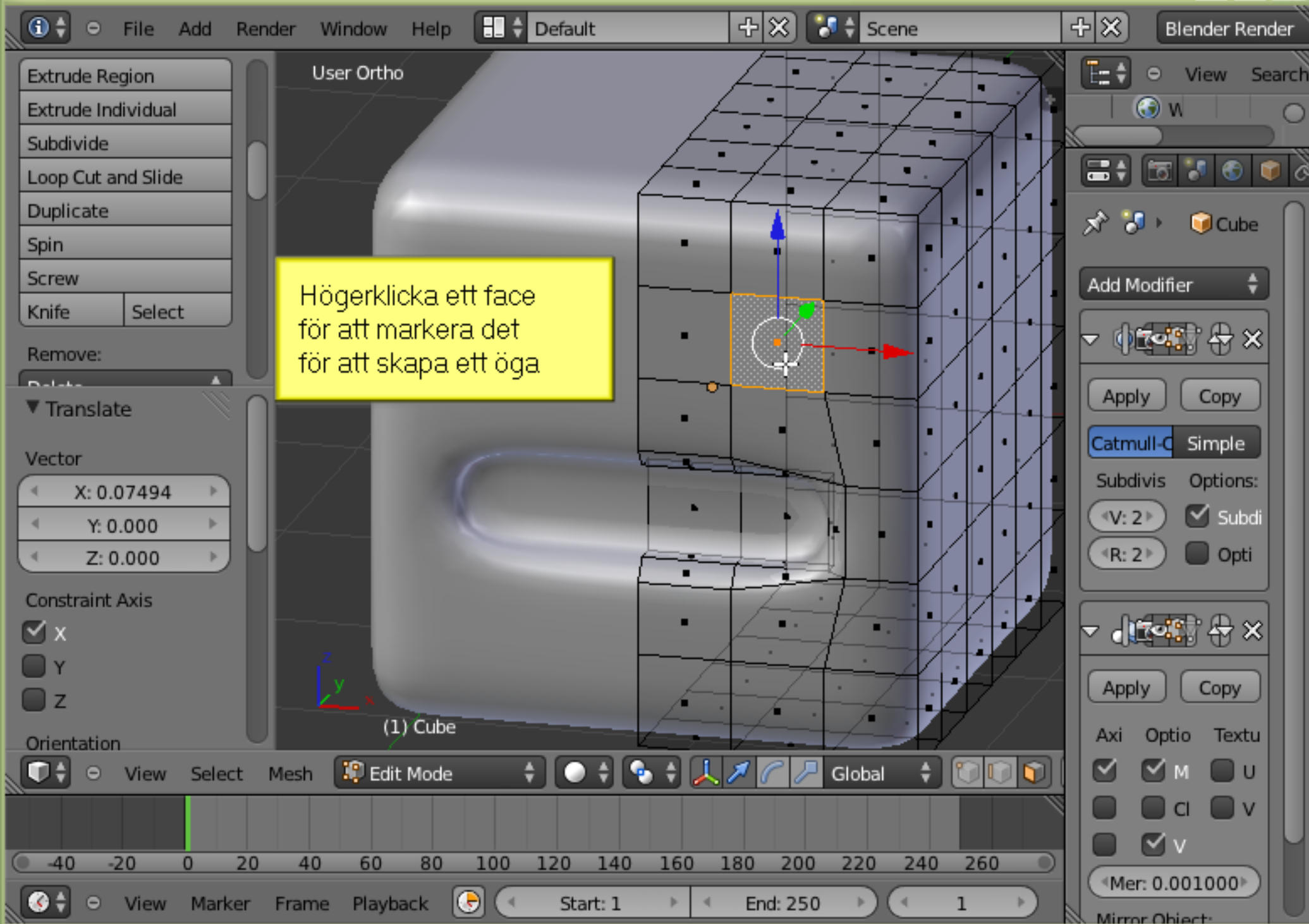


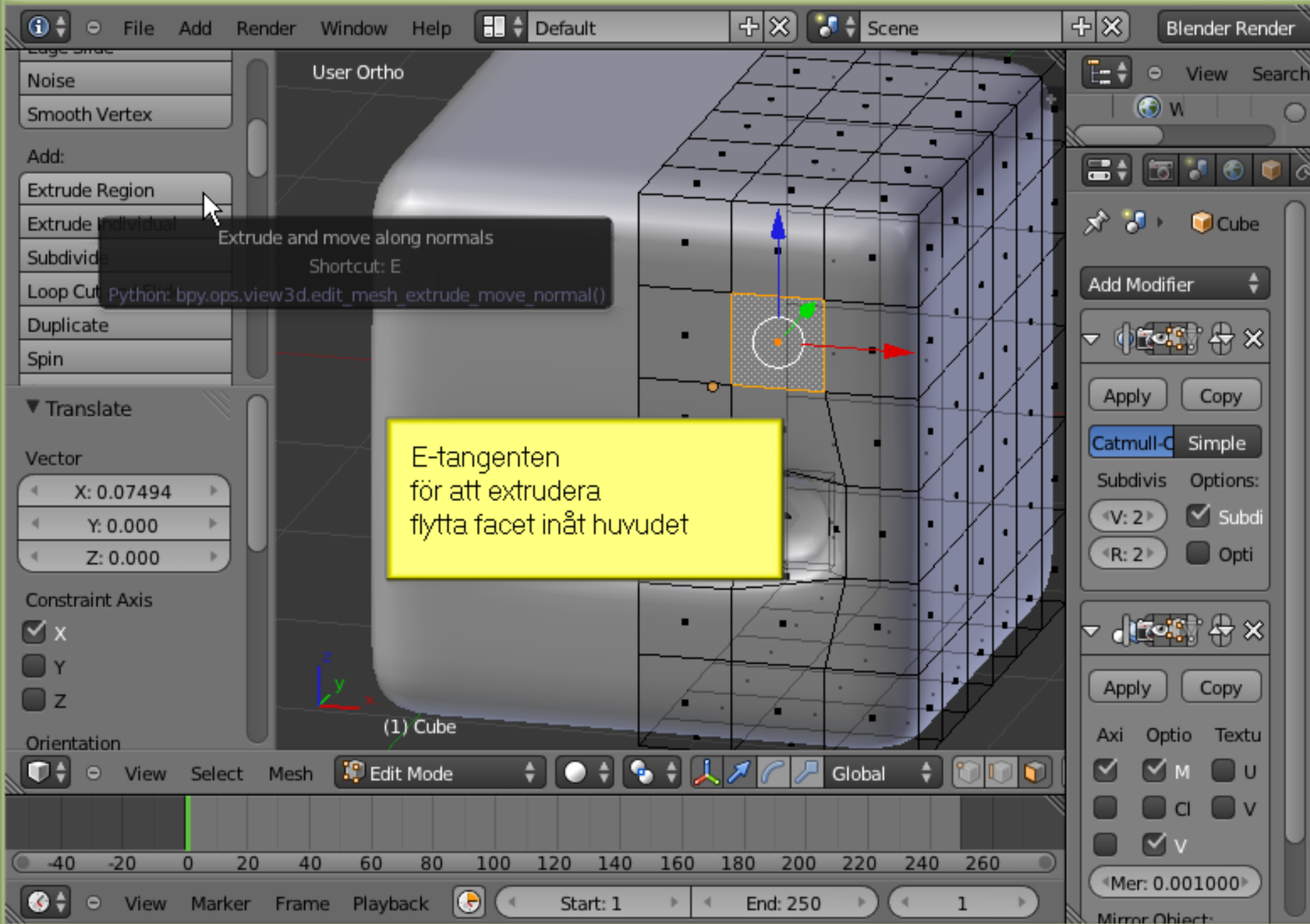


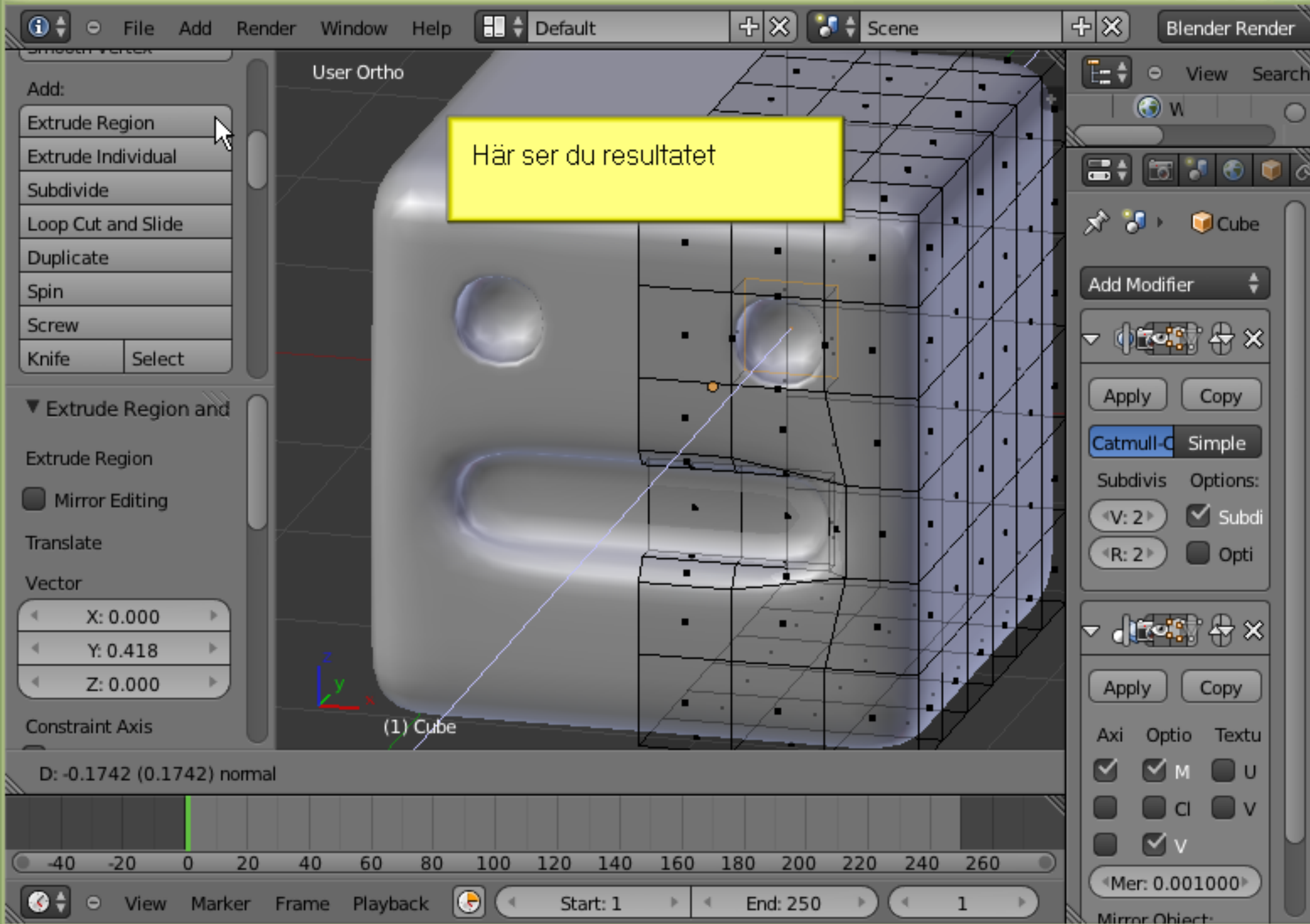


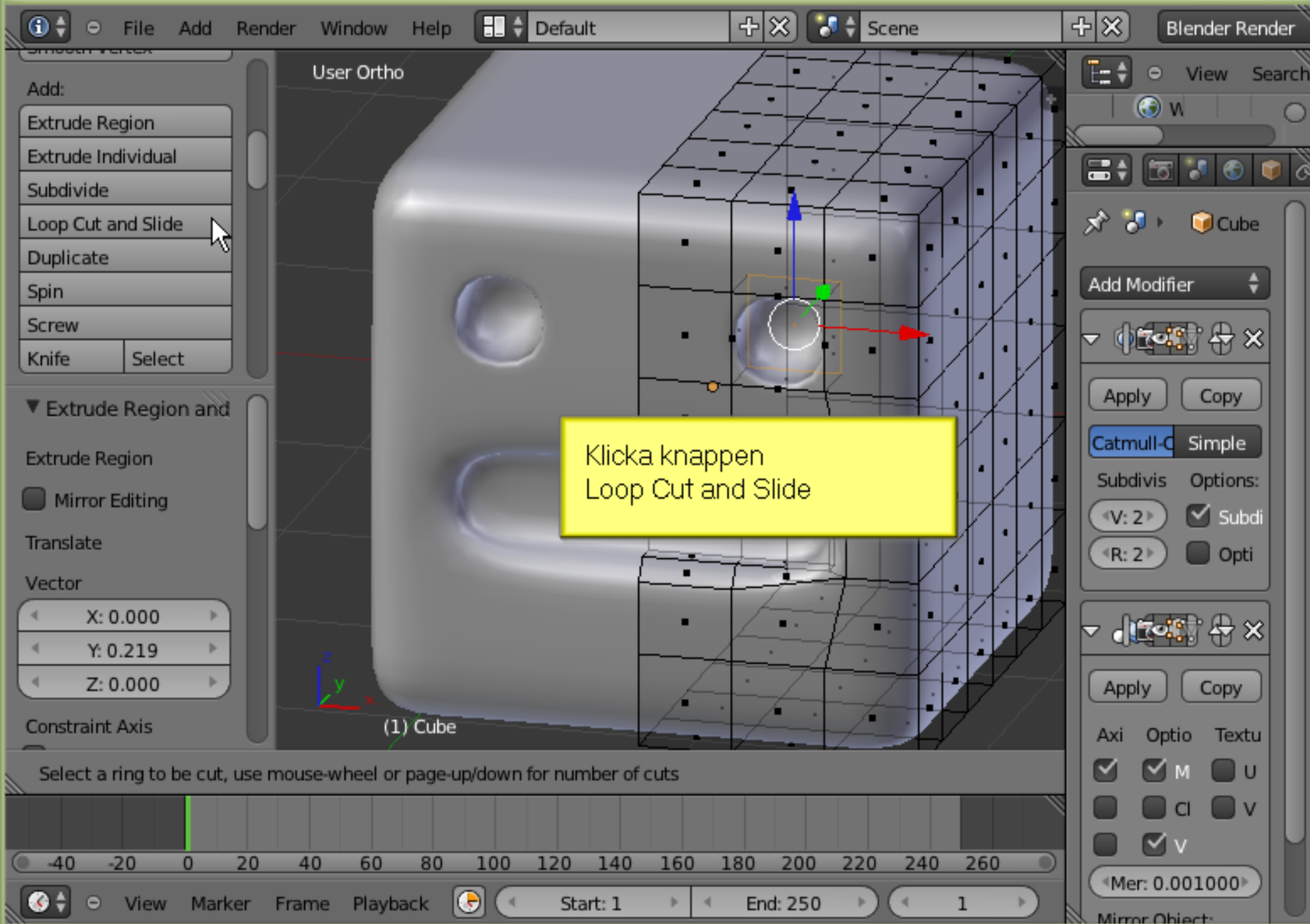


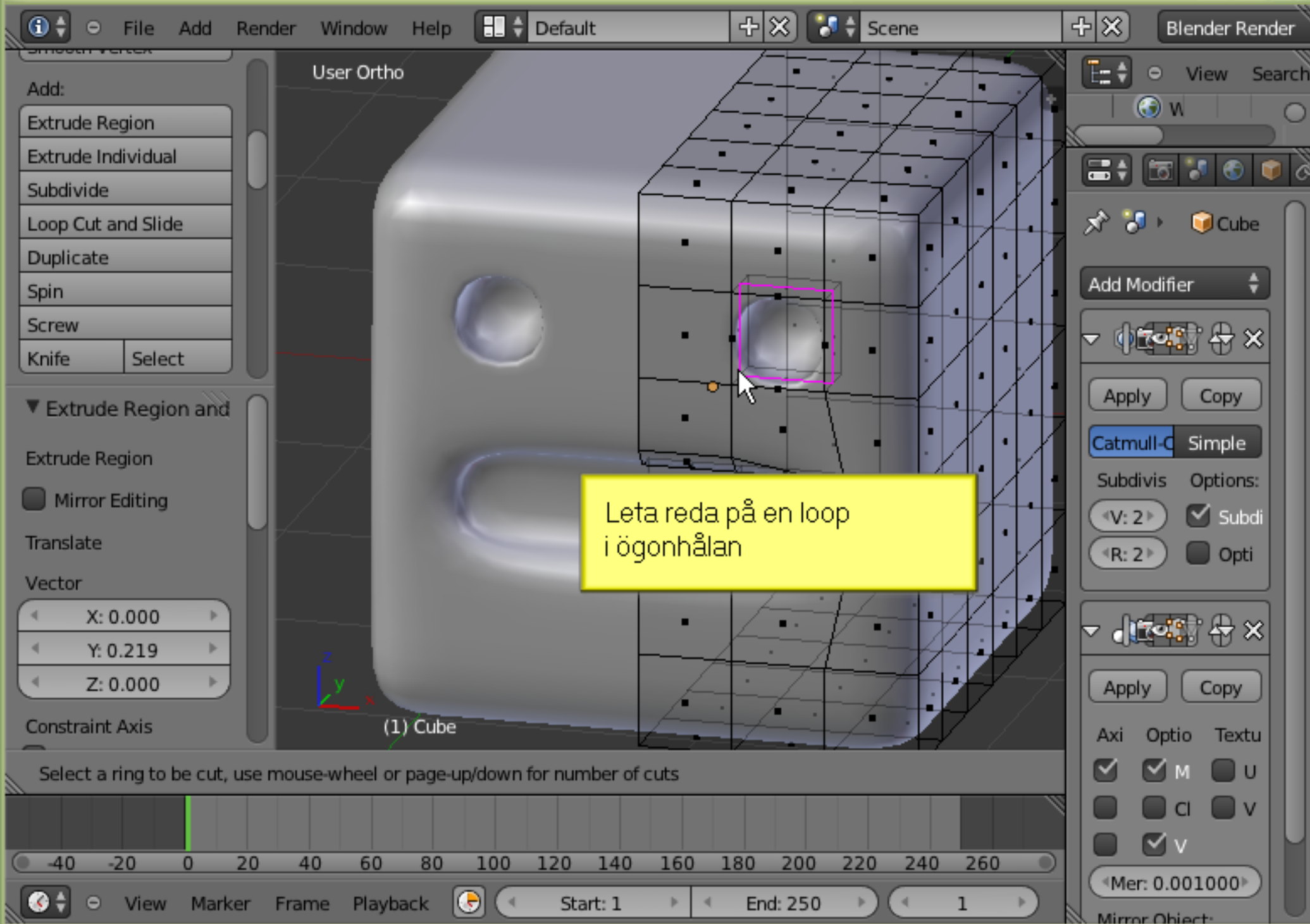


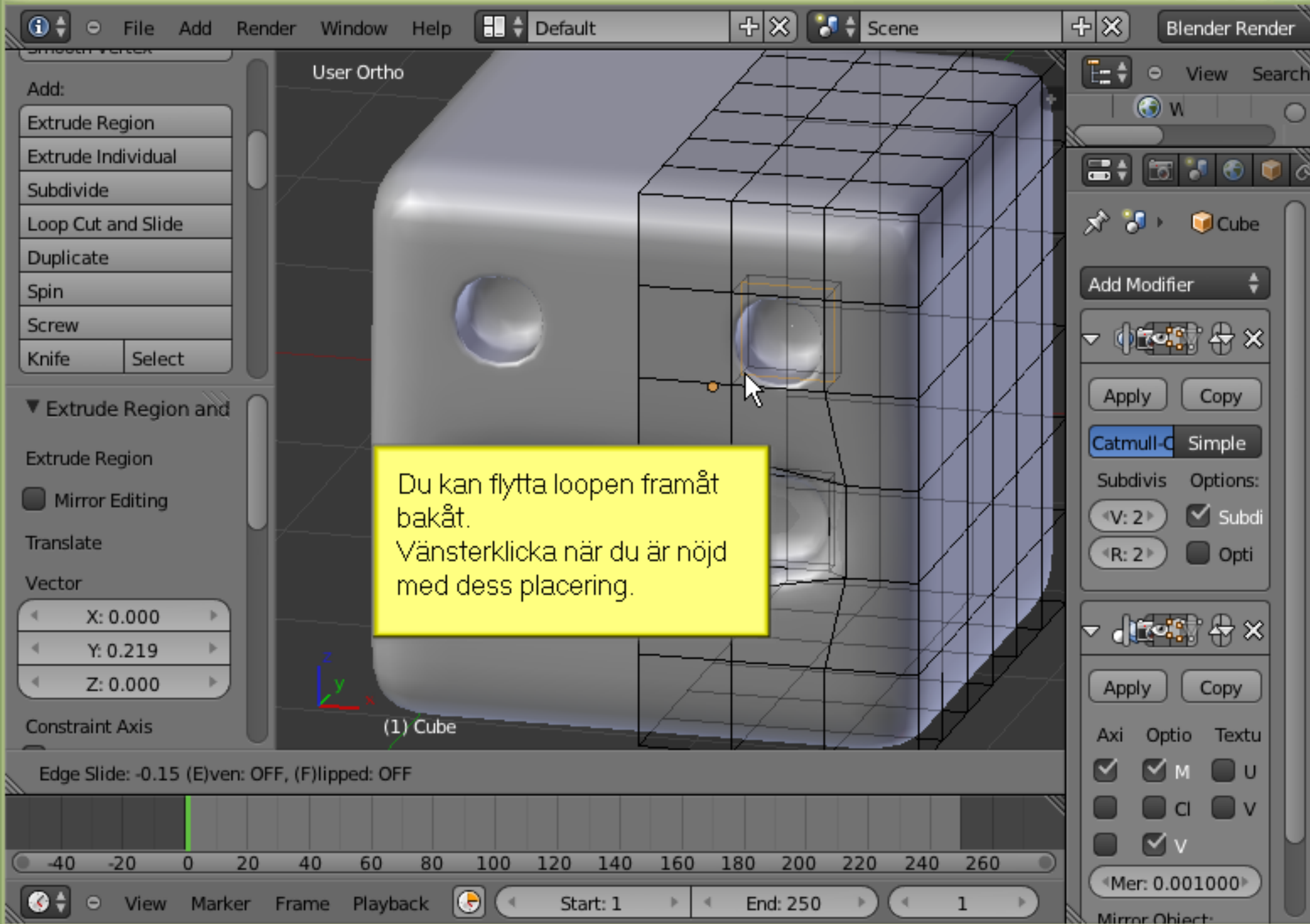


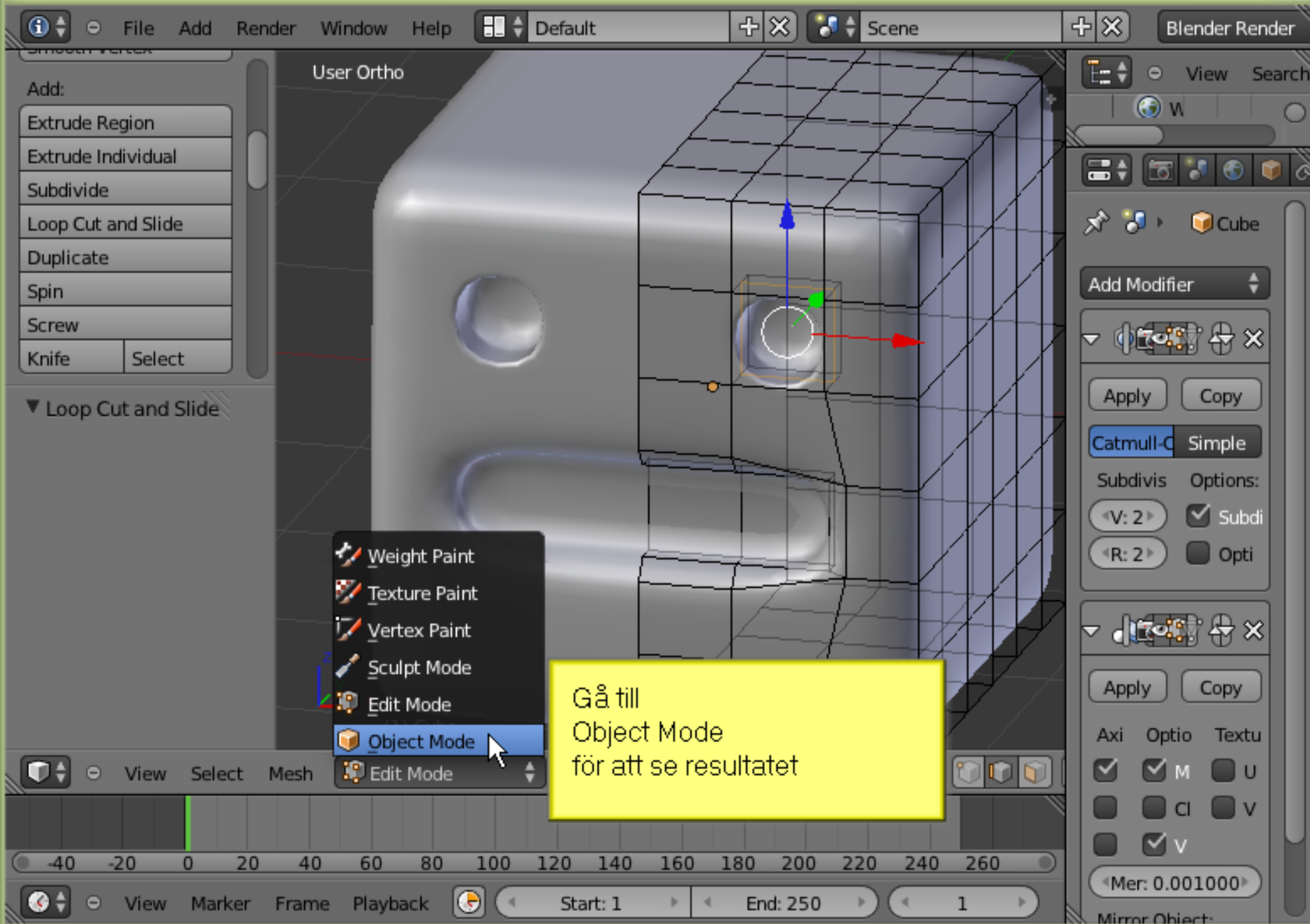


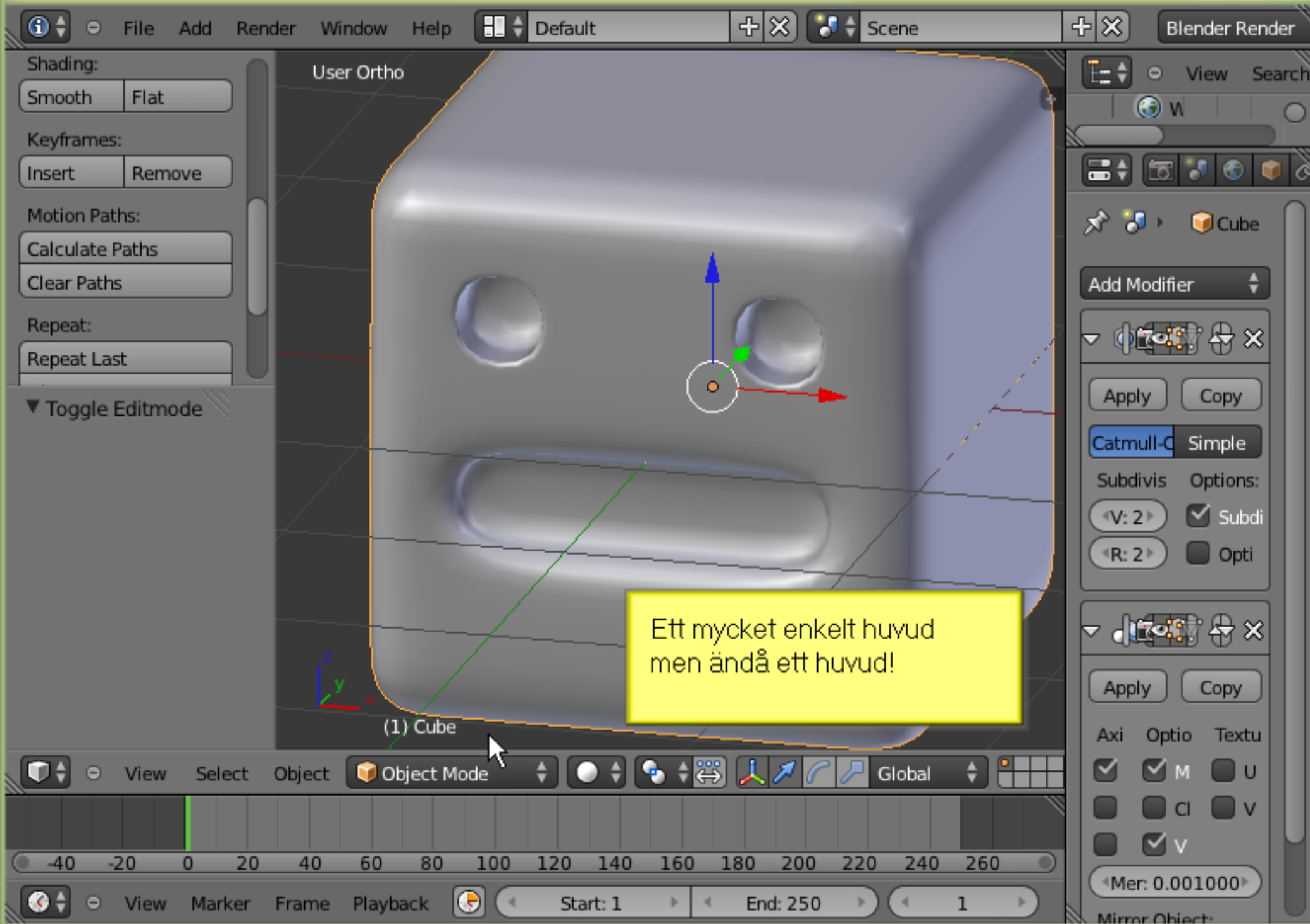


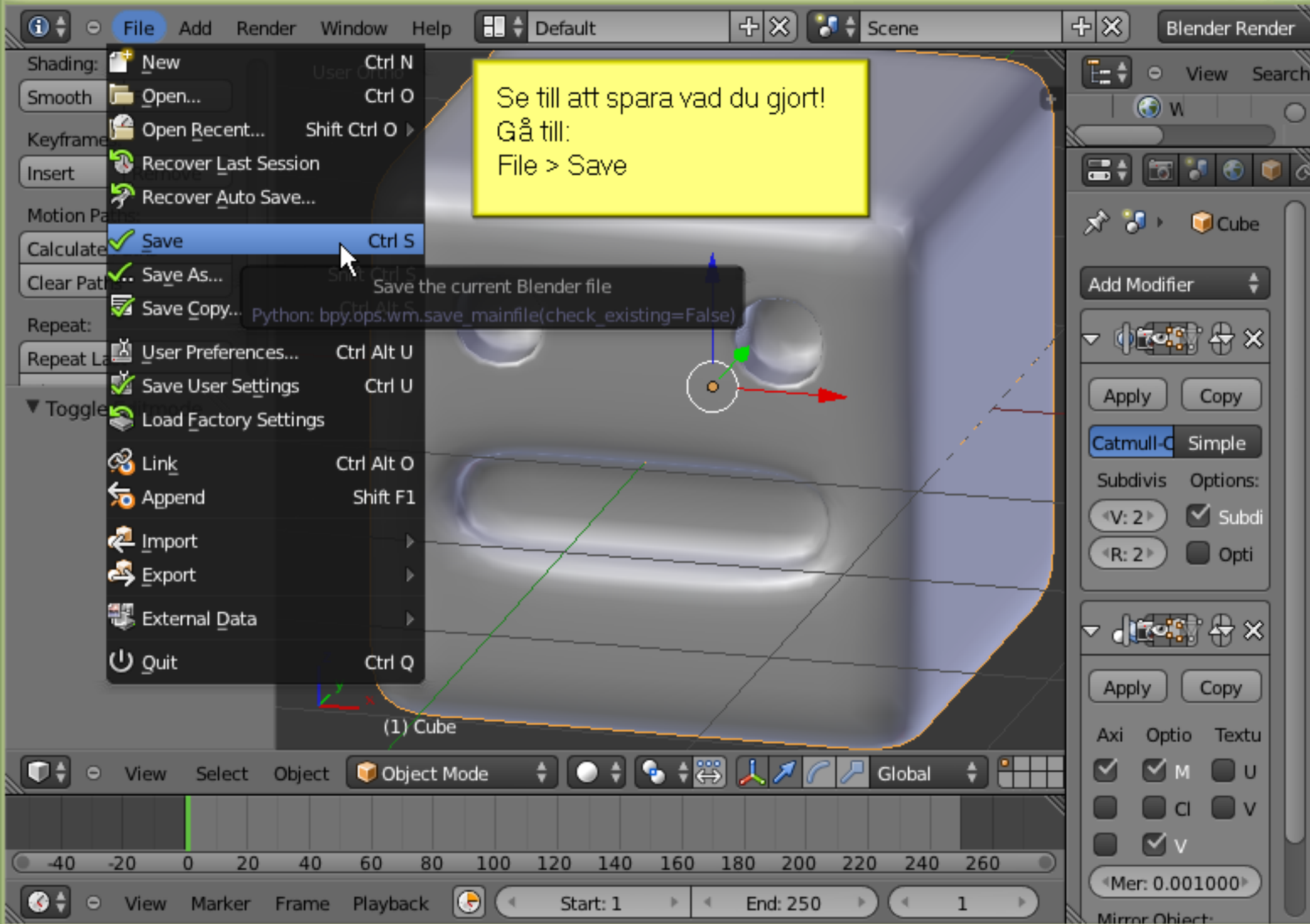


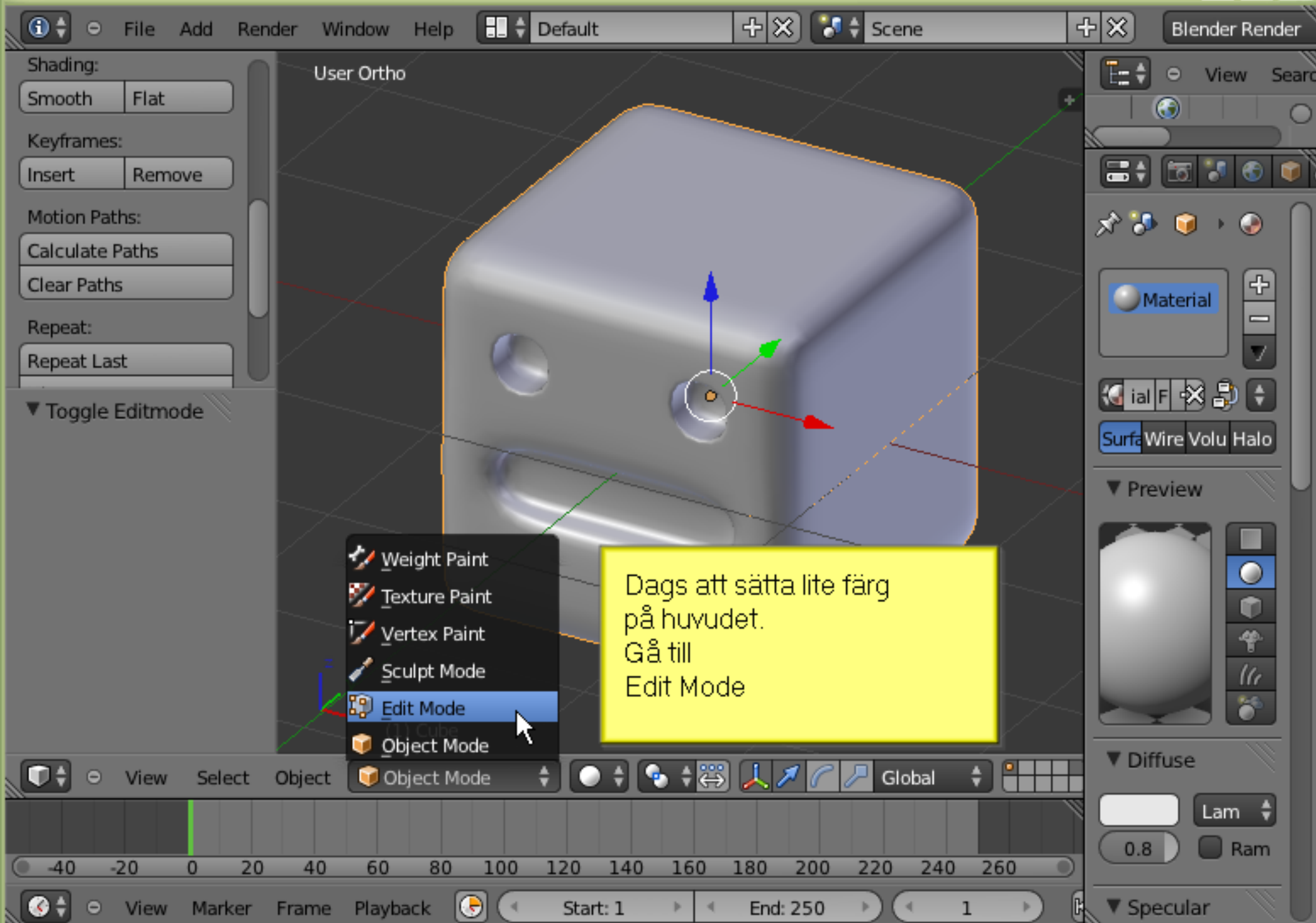


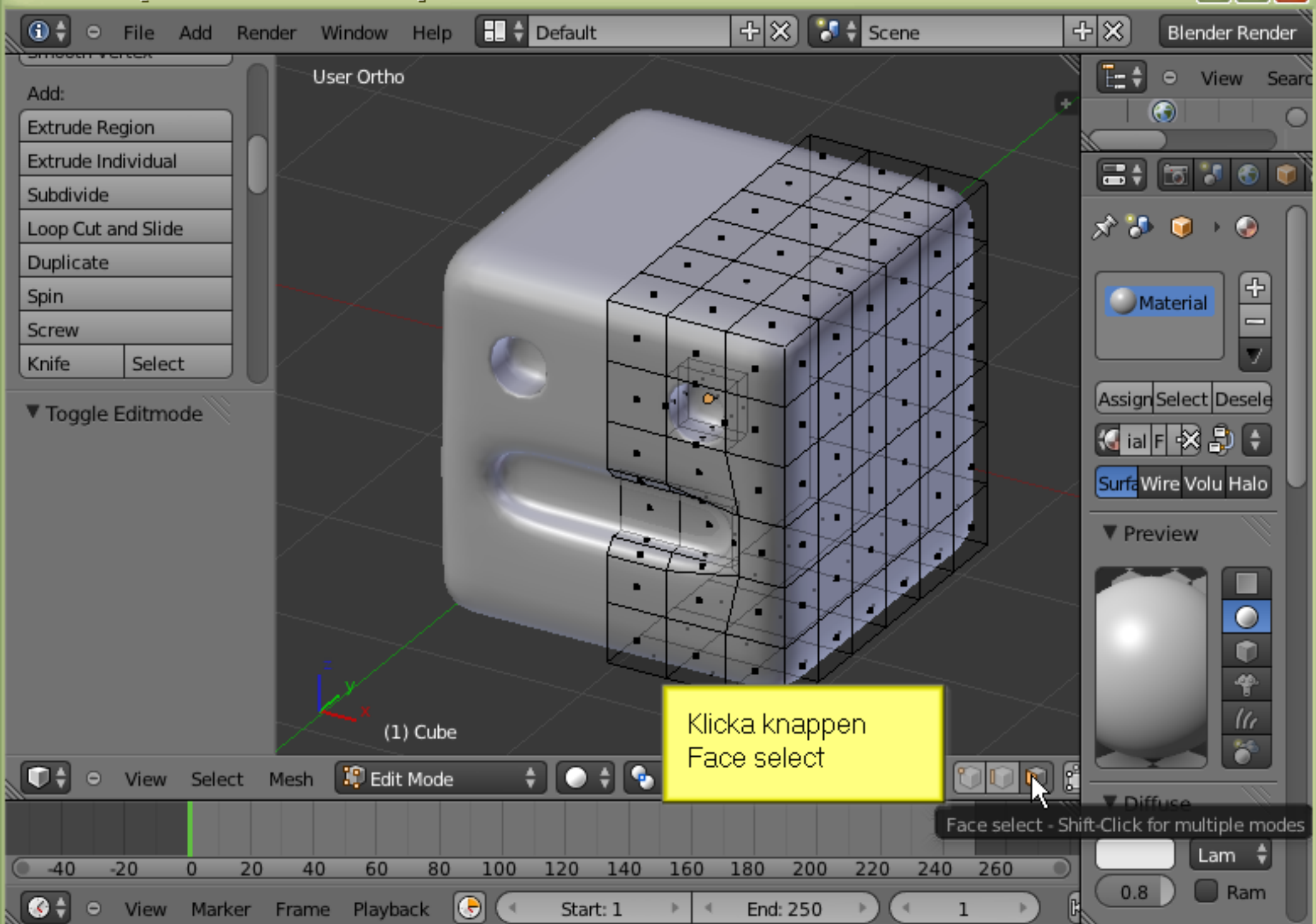










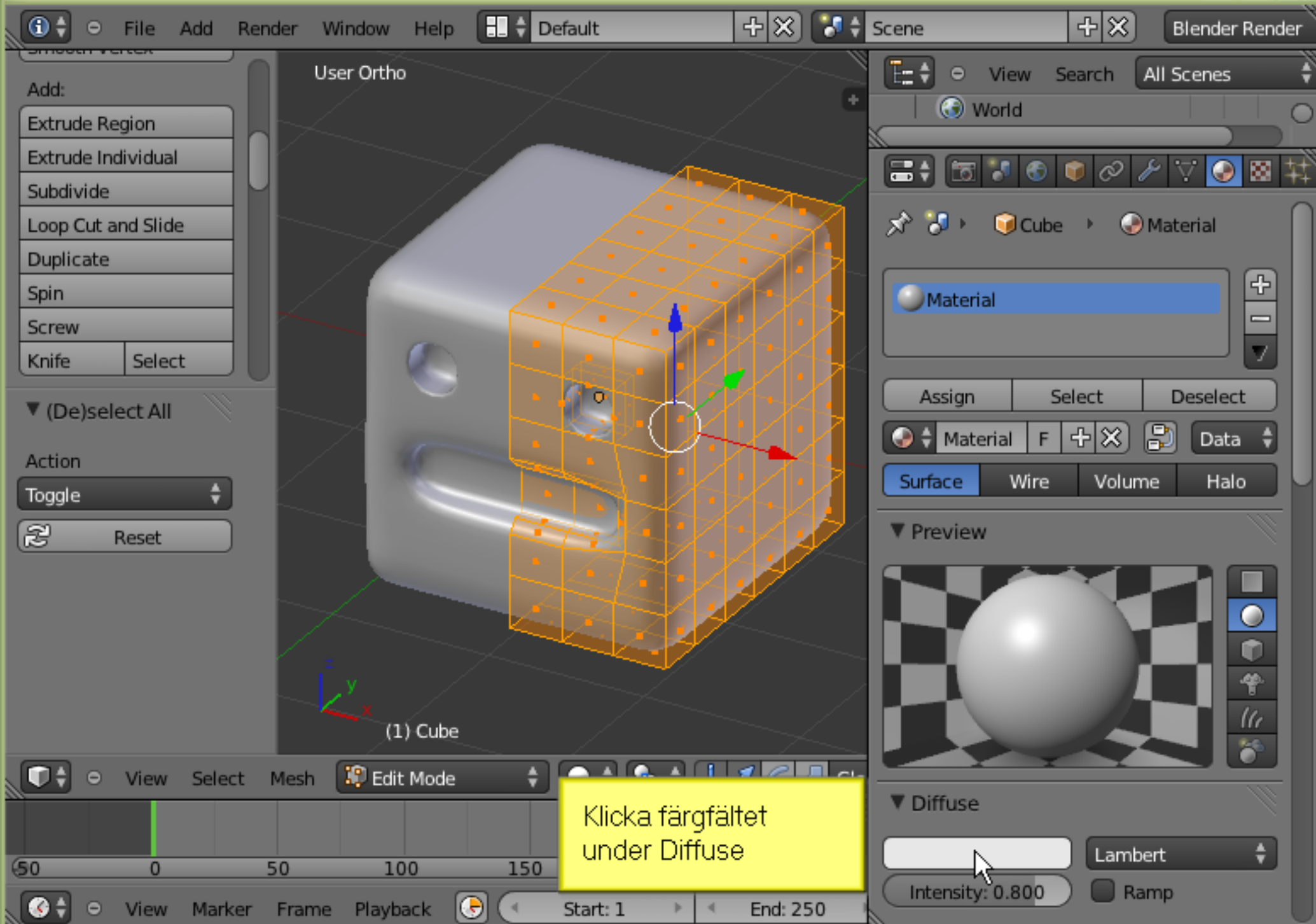


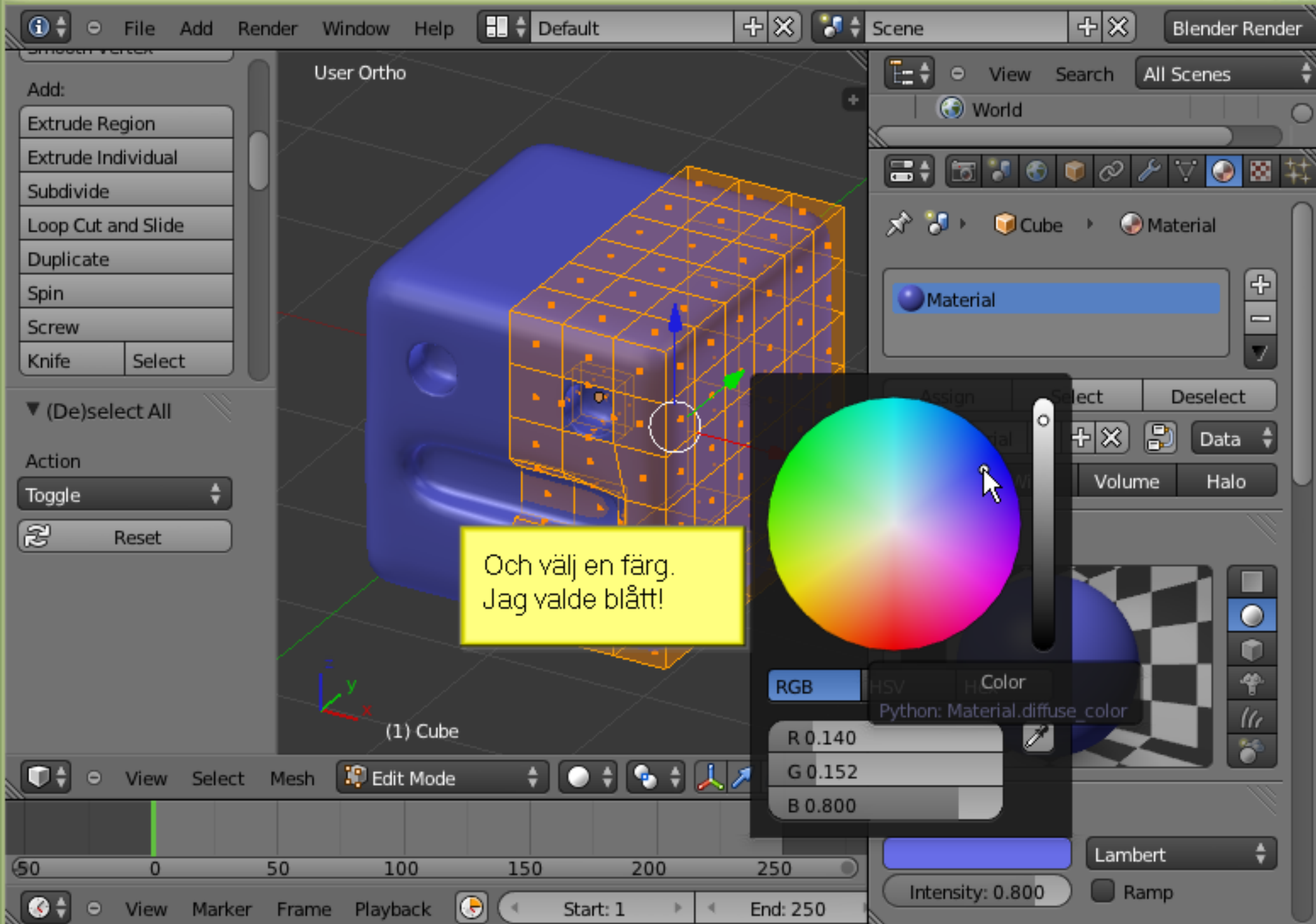
Blender 2.79 interface showing a 3D model of a cube in Edit Mode. The cube is highlighted with an orange wireframe grid. A yellow callout box points to the cube with the text:

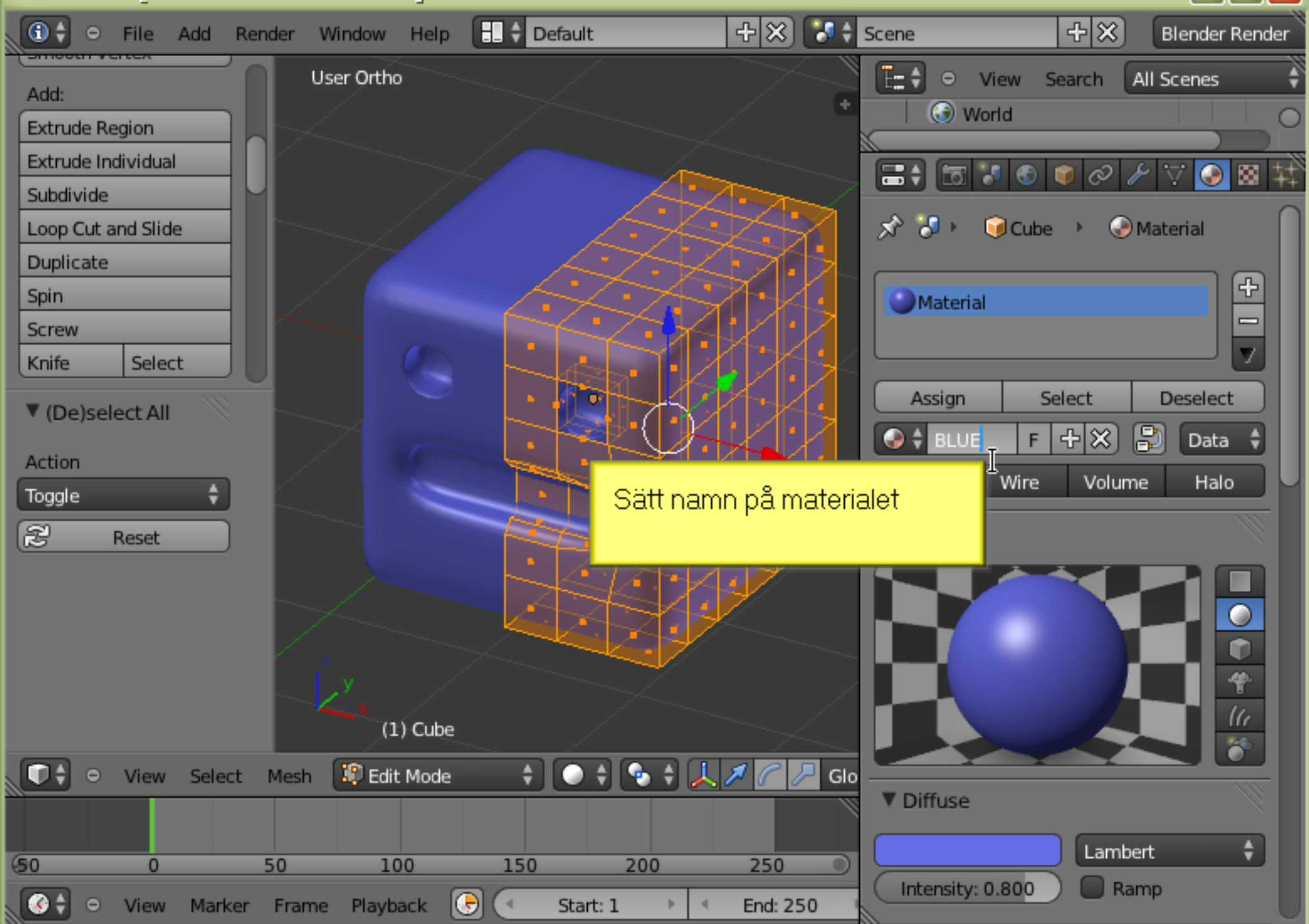
A-tangenten och allt blir markerat.
Gå sen till fliken Material

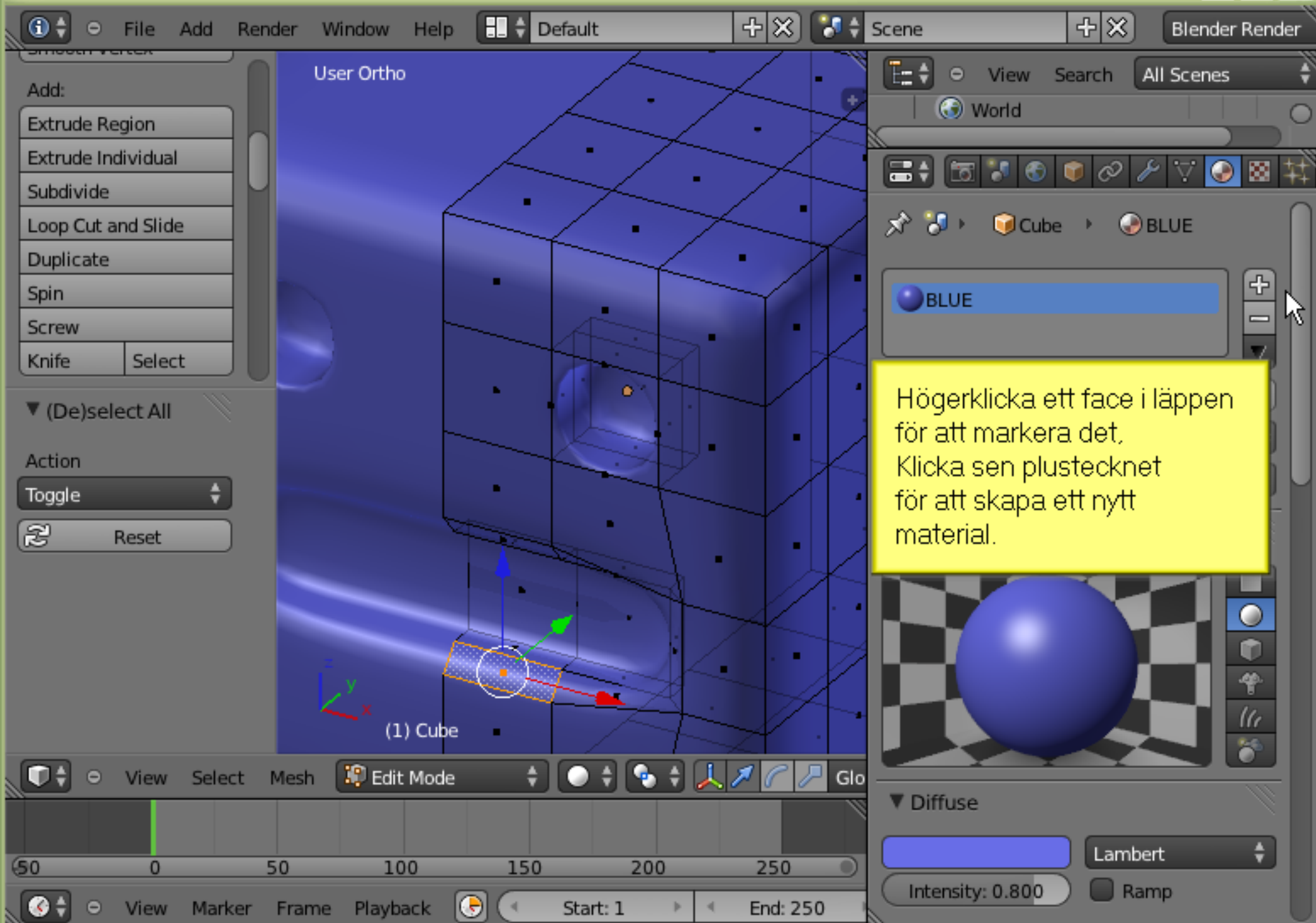
The interface includes the following panels:

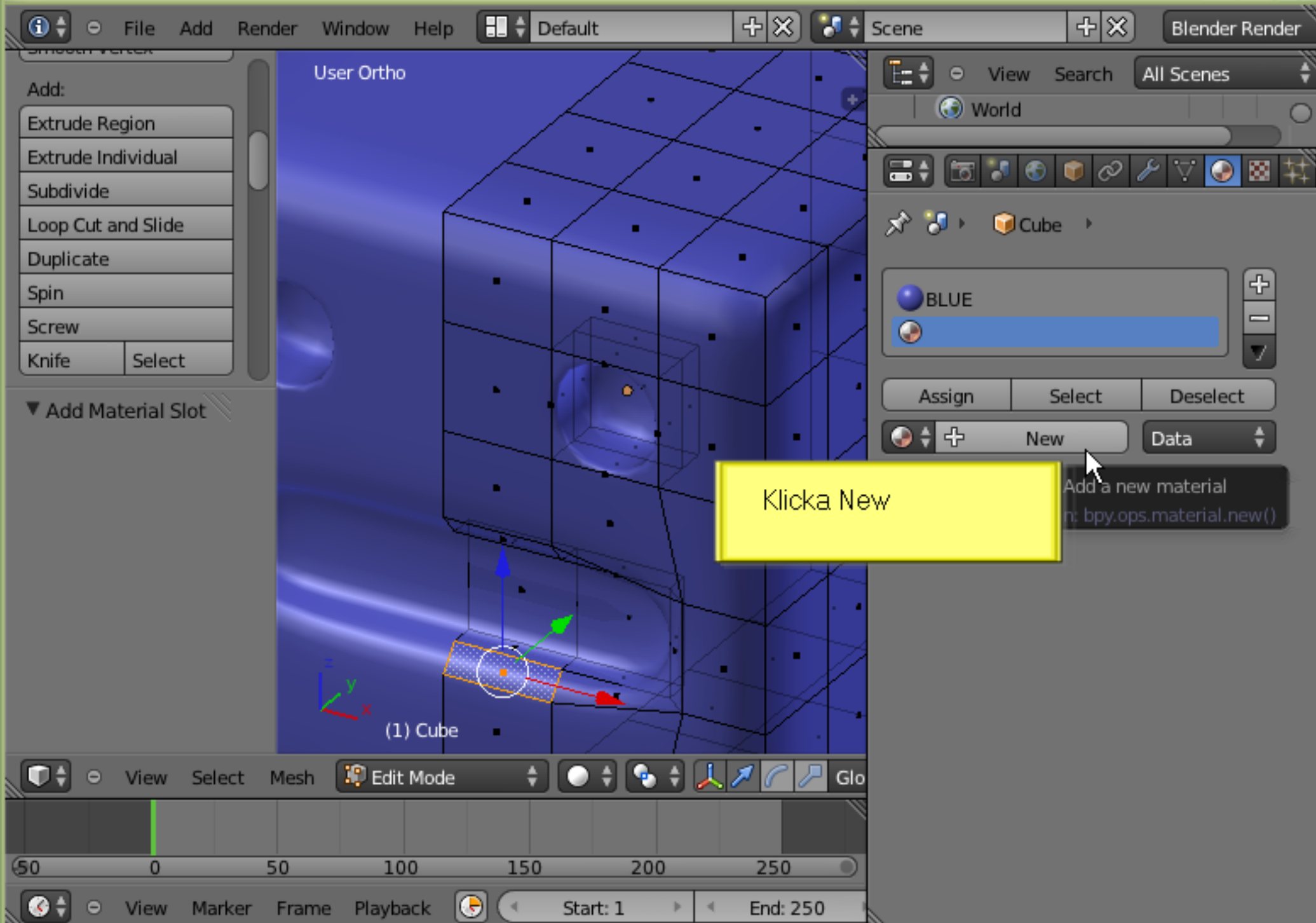
- Left Panel (Tools Shelf):** Add: Extrude Region, Extrude Individual, Subdivide, Loop Cut and Slide, Duplicate, Spin, Screw, Knife, Select. (De)select All. Action: Toggle, Reset.
- Top Panel:** File, Add, Render, Window, Help. Default, Scene, Blender Render.
- Right Panel (Properties):** View, Search, All Scenes, World. Material properties: Assign, Select, Deselect. Material, F, +, X, Data. Surface, Wire, Volume, Halo. Preview: A sphere on a checkerboard. Diffuse: Lambert, Intensity: 0.800, Ramp.
- Bottom Panel:** View, Select, Mesh, Edit Mode. Timeline: Start: 1, End: 250.

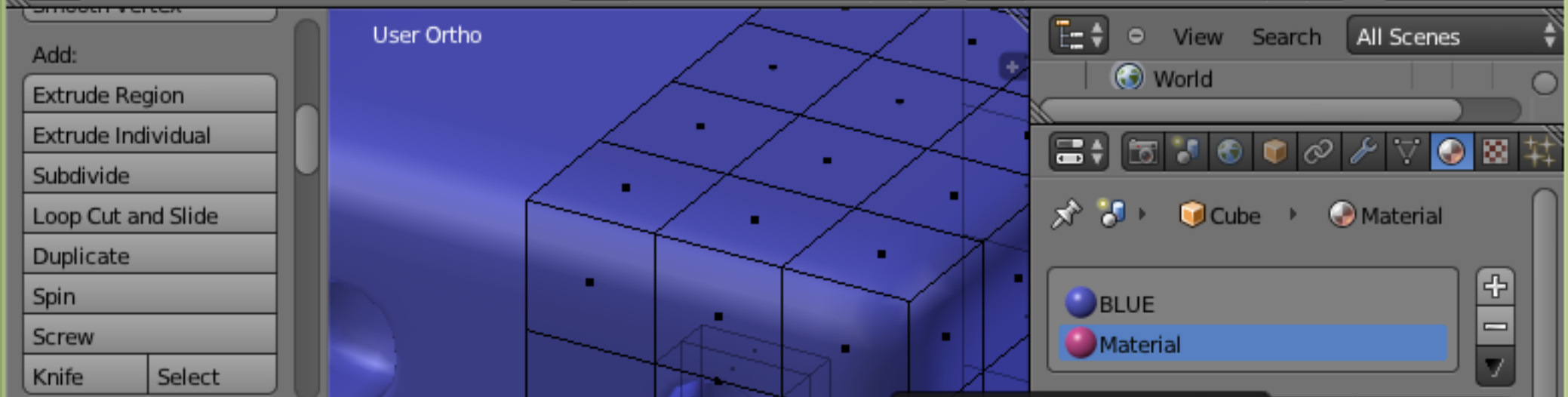










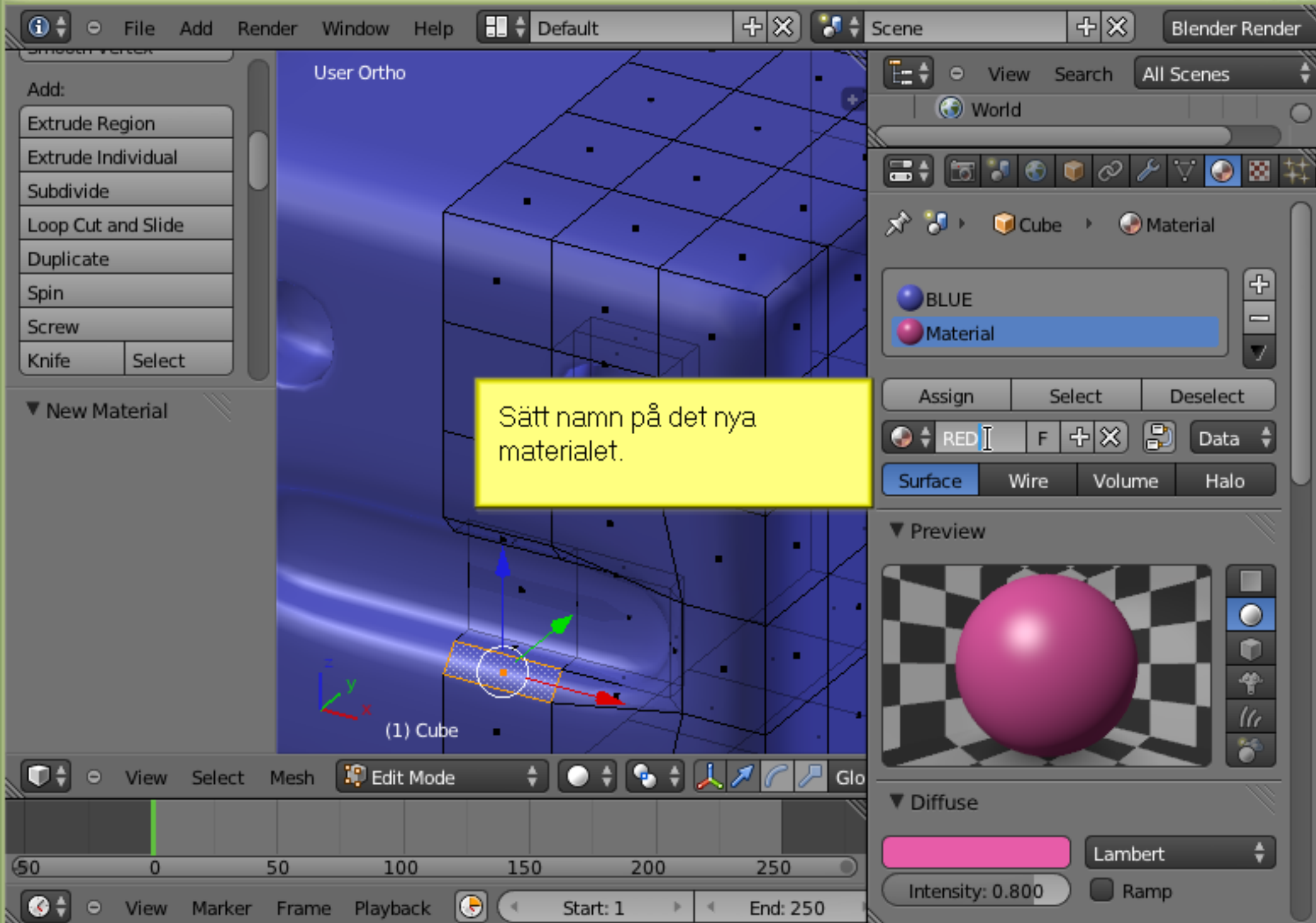


Och välj en färg till läpparna.

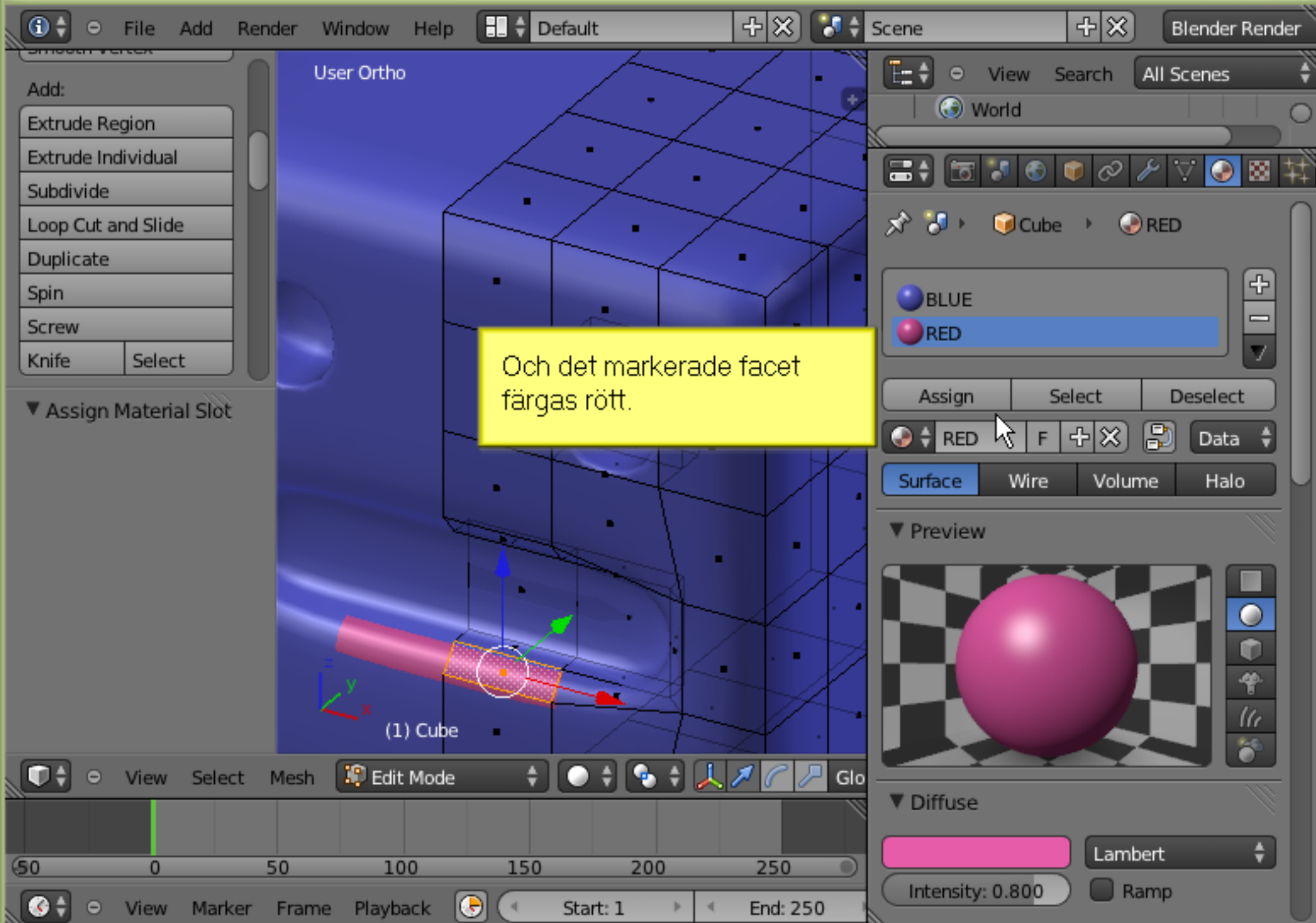
A color picker dialog box is open, showing a color wheel and a vertical gradient bar. The 'RGB' tab is selected, displaying the following values:

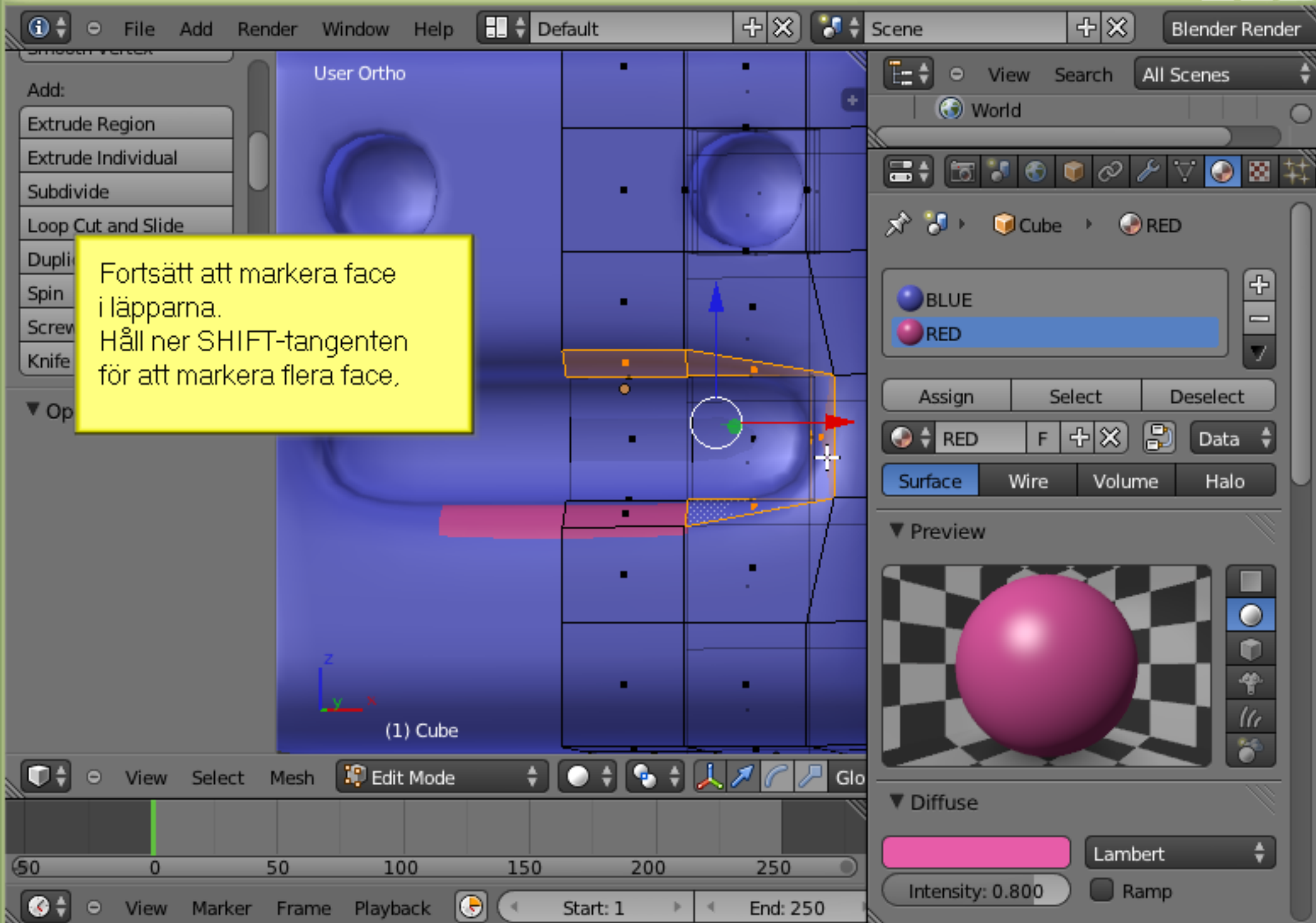
Channel	Value
R	0.800
G	0.108
B	0.392

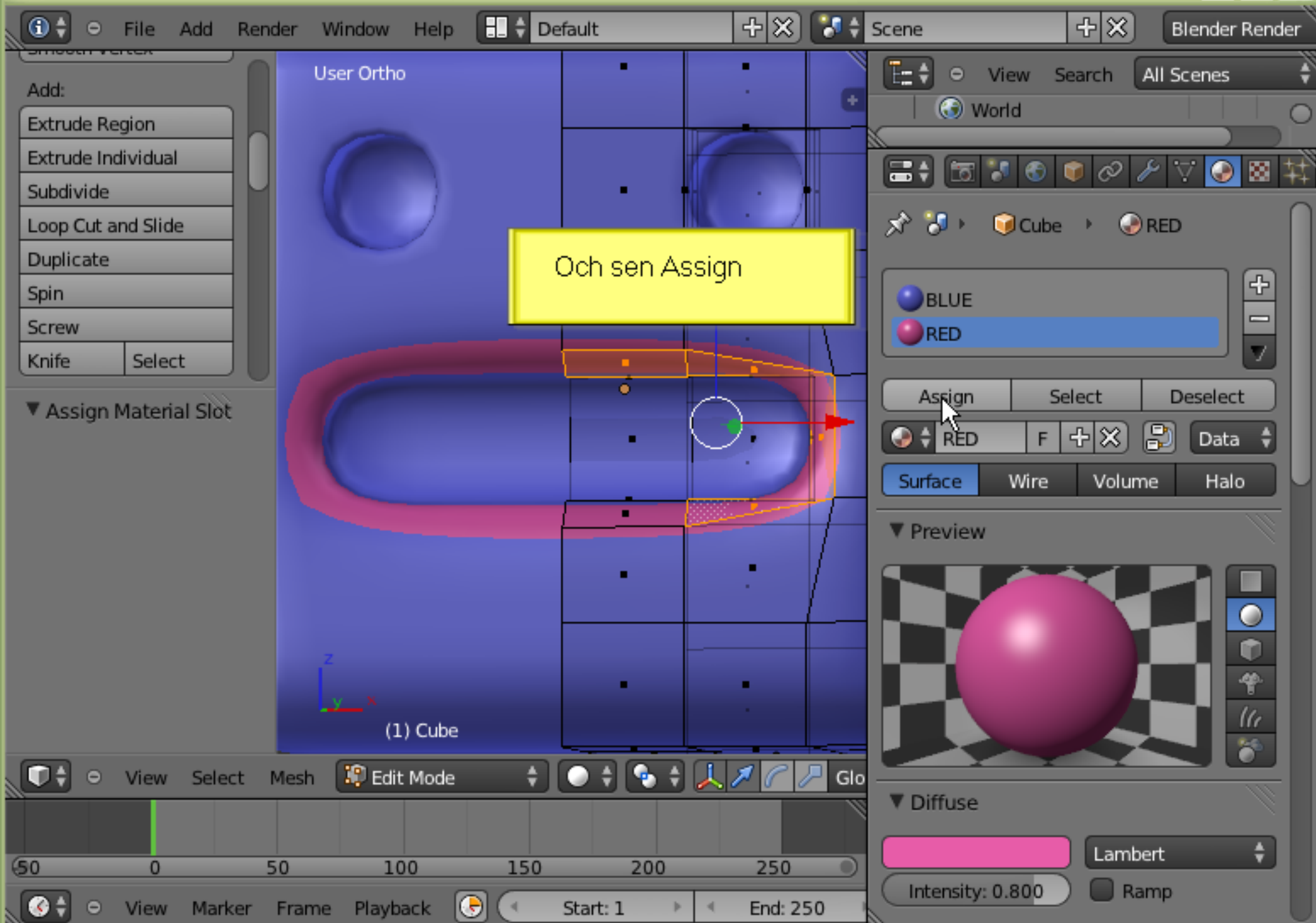
The dialog also includes tabs for 'HSV' and 'H-Color', and a 'Python: Material.diffuse_color' input field.

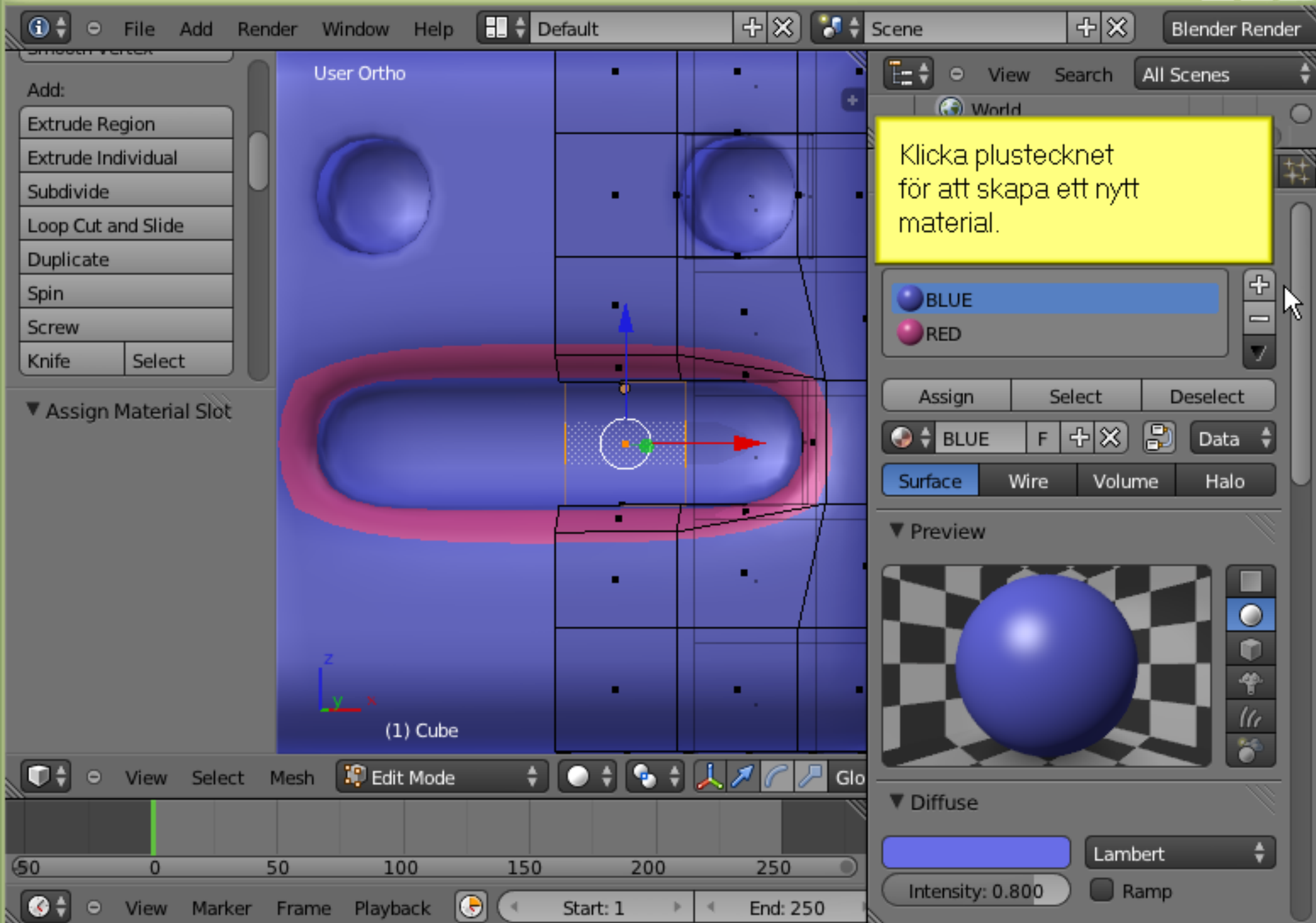


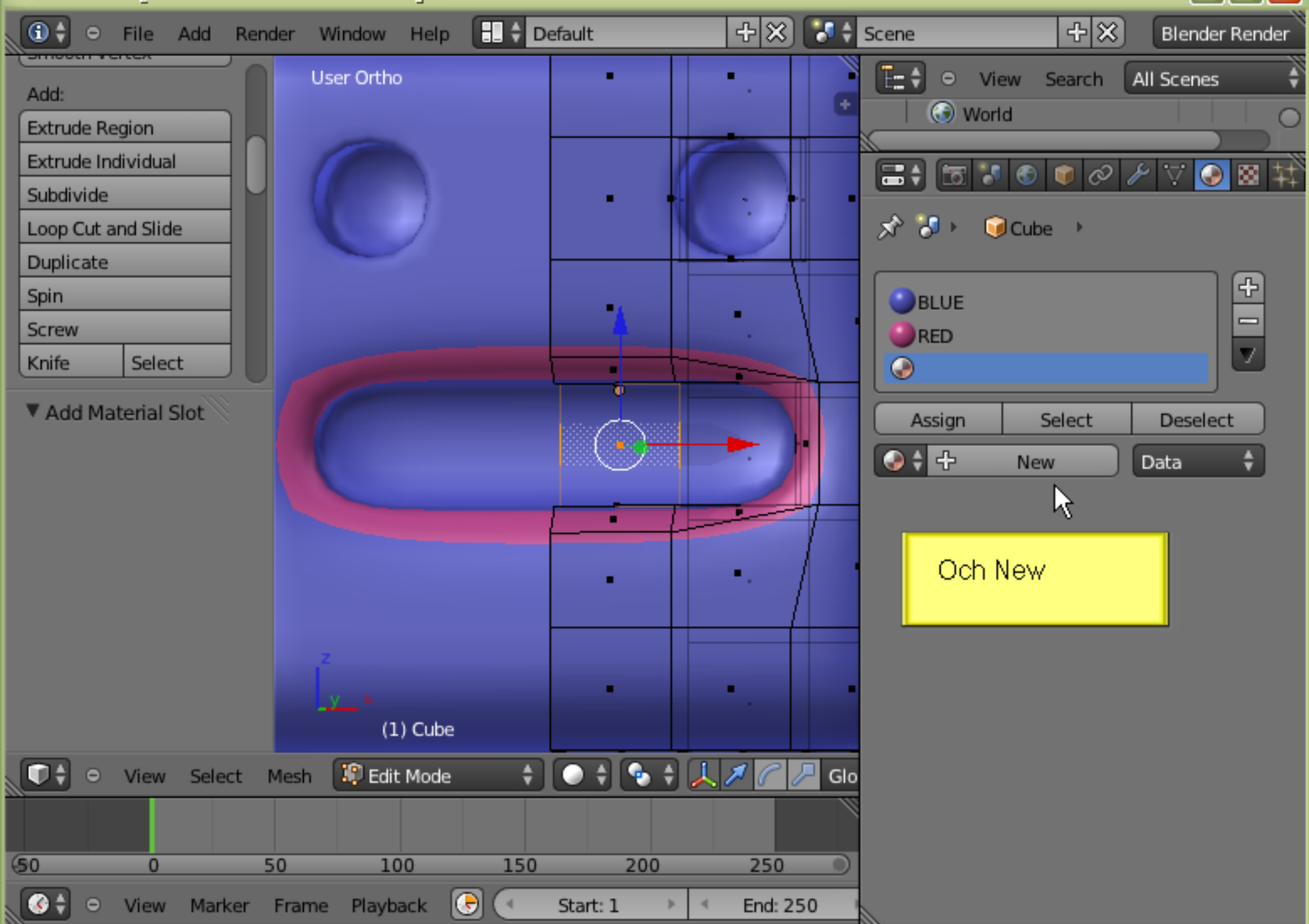
Lambert

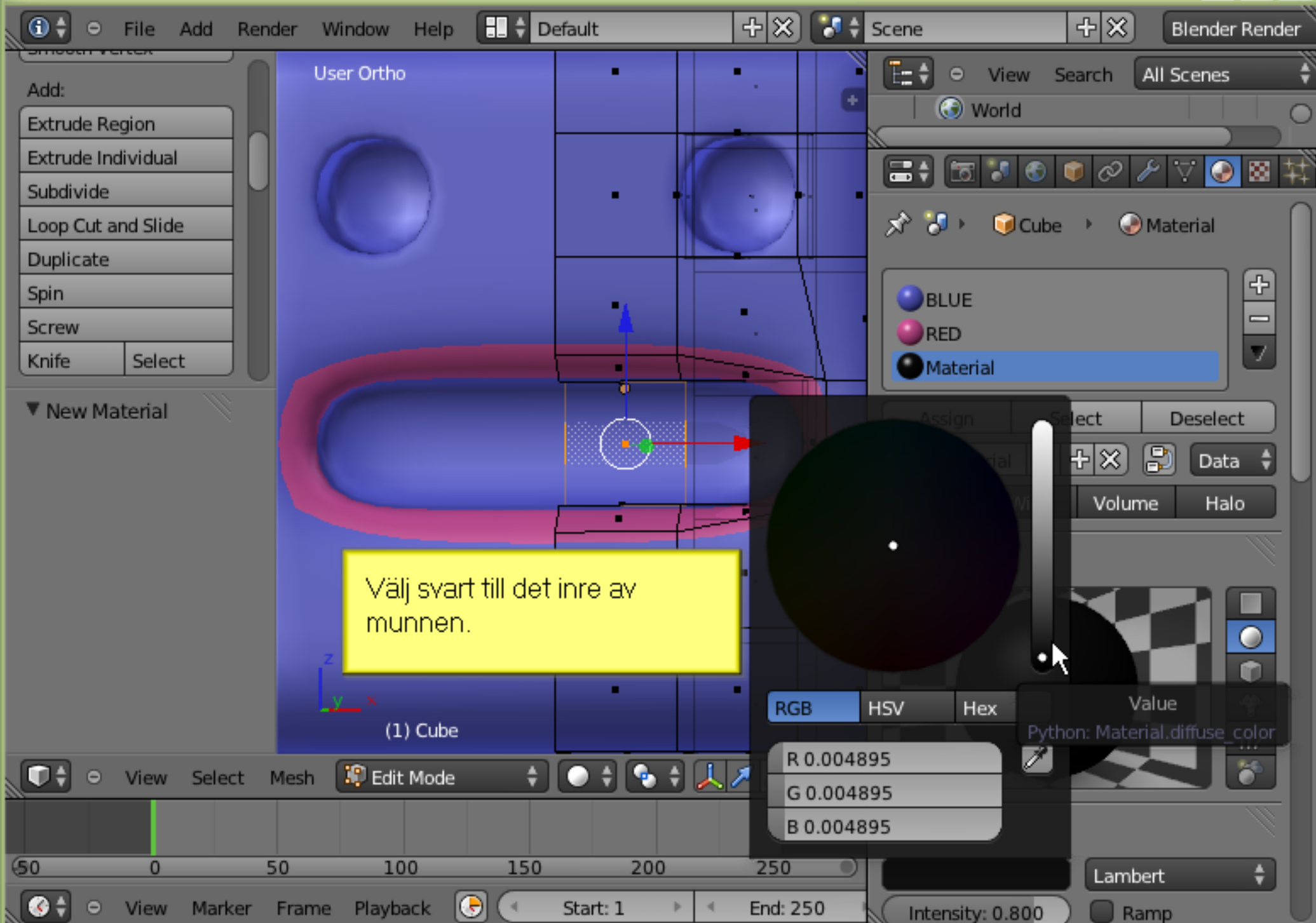












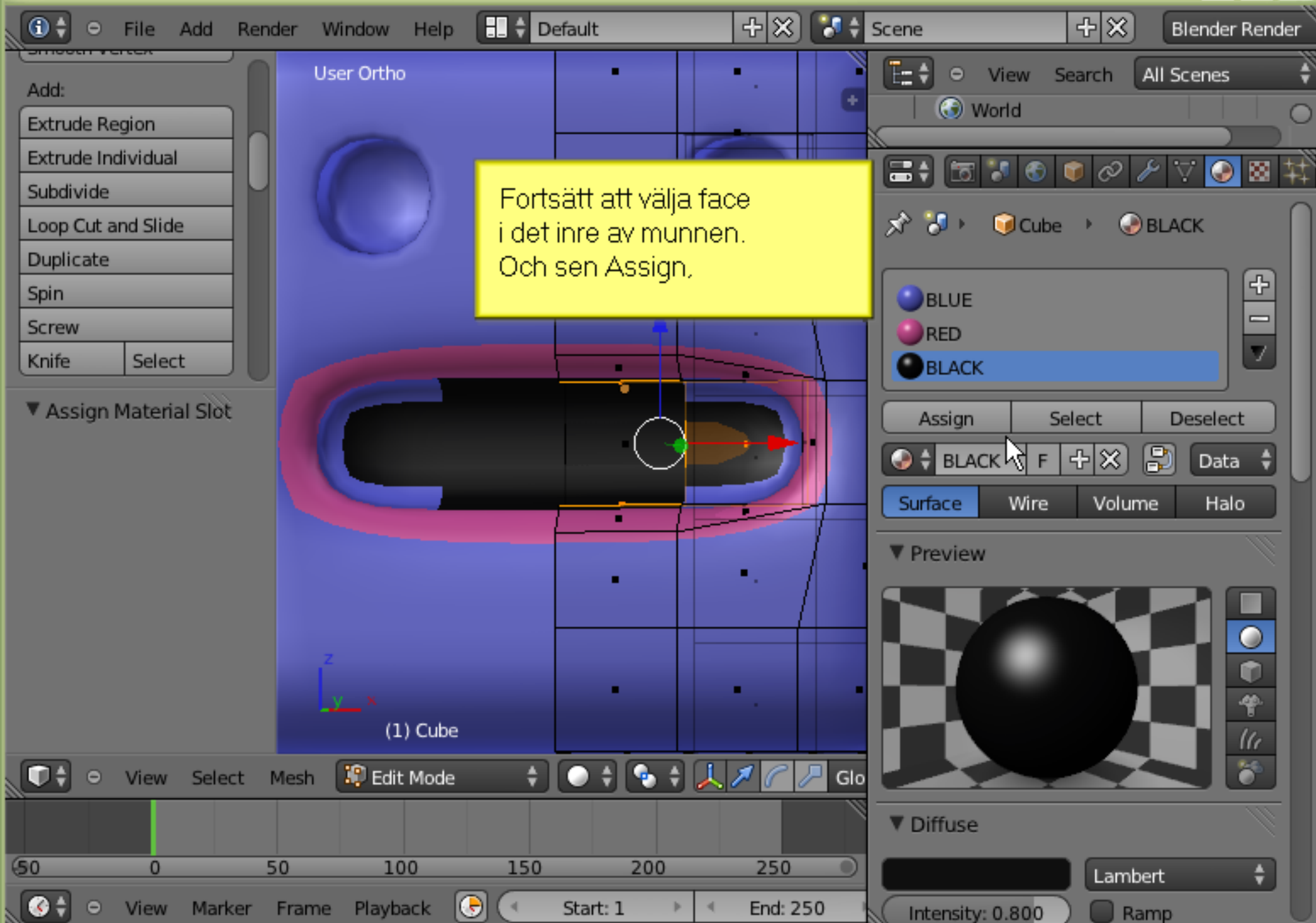
Blender interface showing a 3D model of a blue sphere with a pink ring and a black cube. A yellow text box in the center reads:

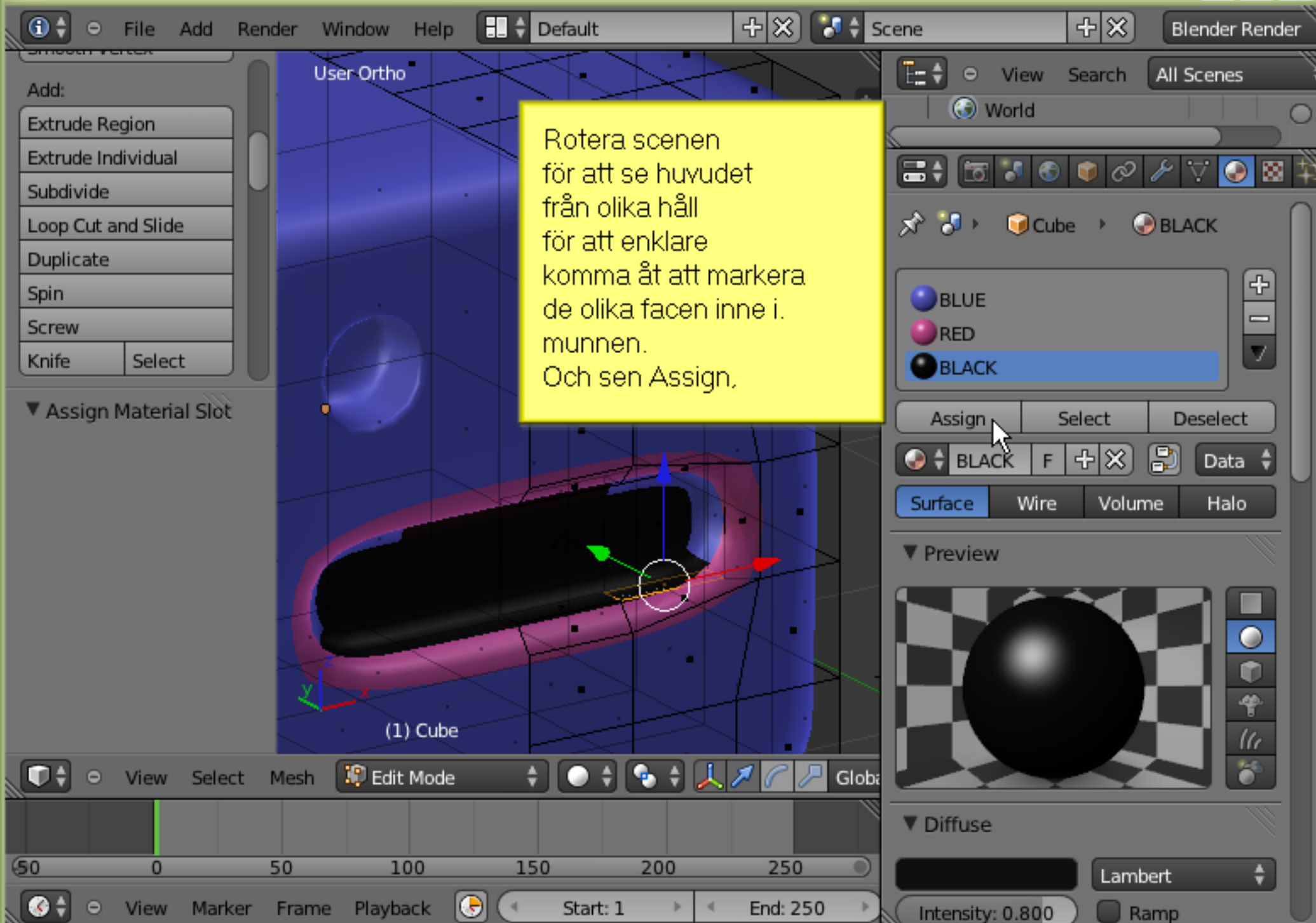
Sätt namn på materialet.
Välj ett eller flera face
i munnen.
Och sen Assign.

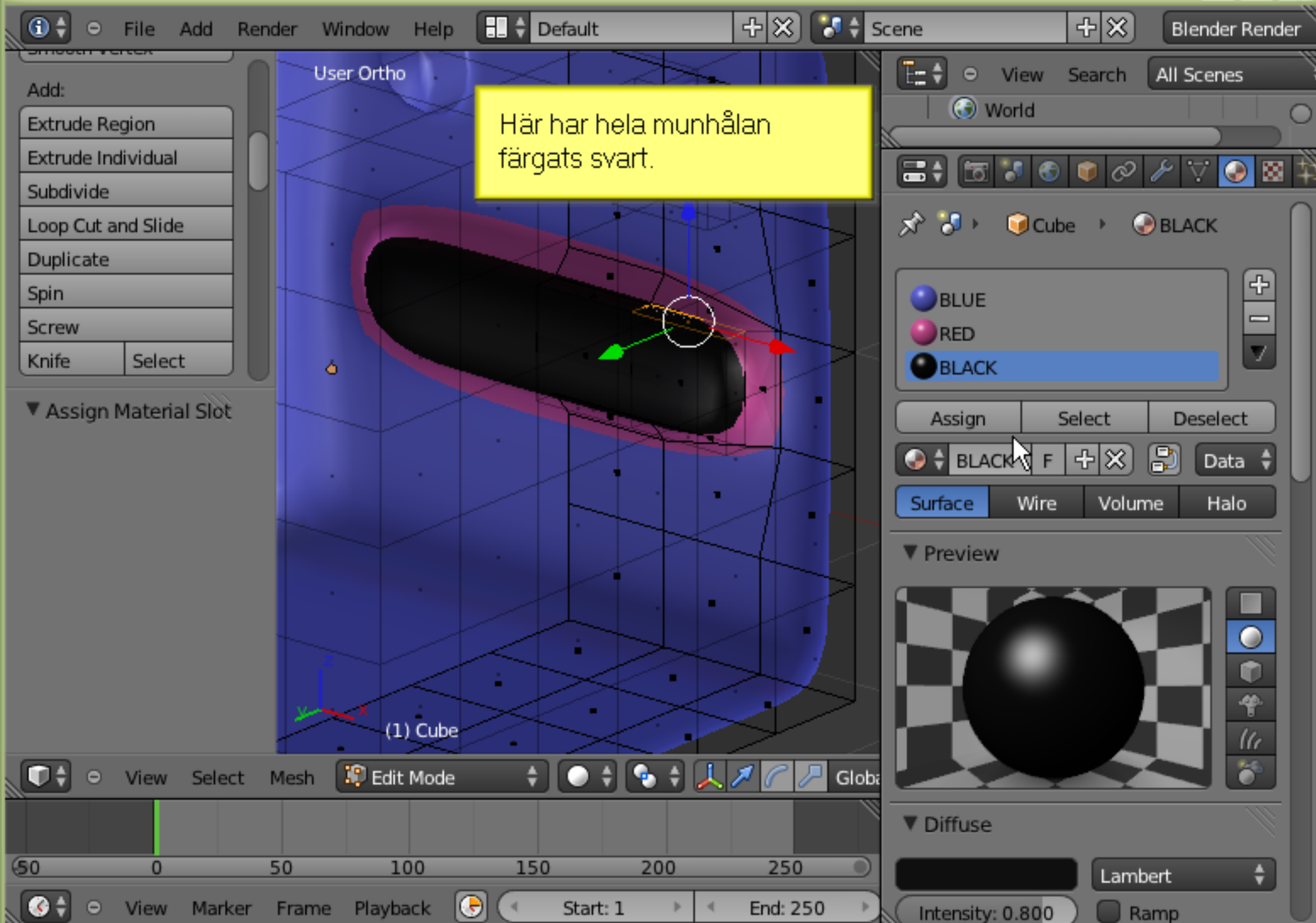
The interface includes the following panels and controls:

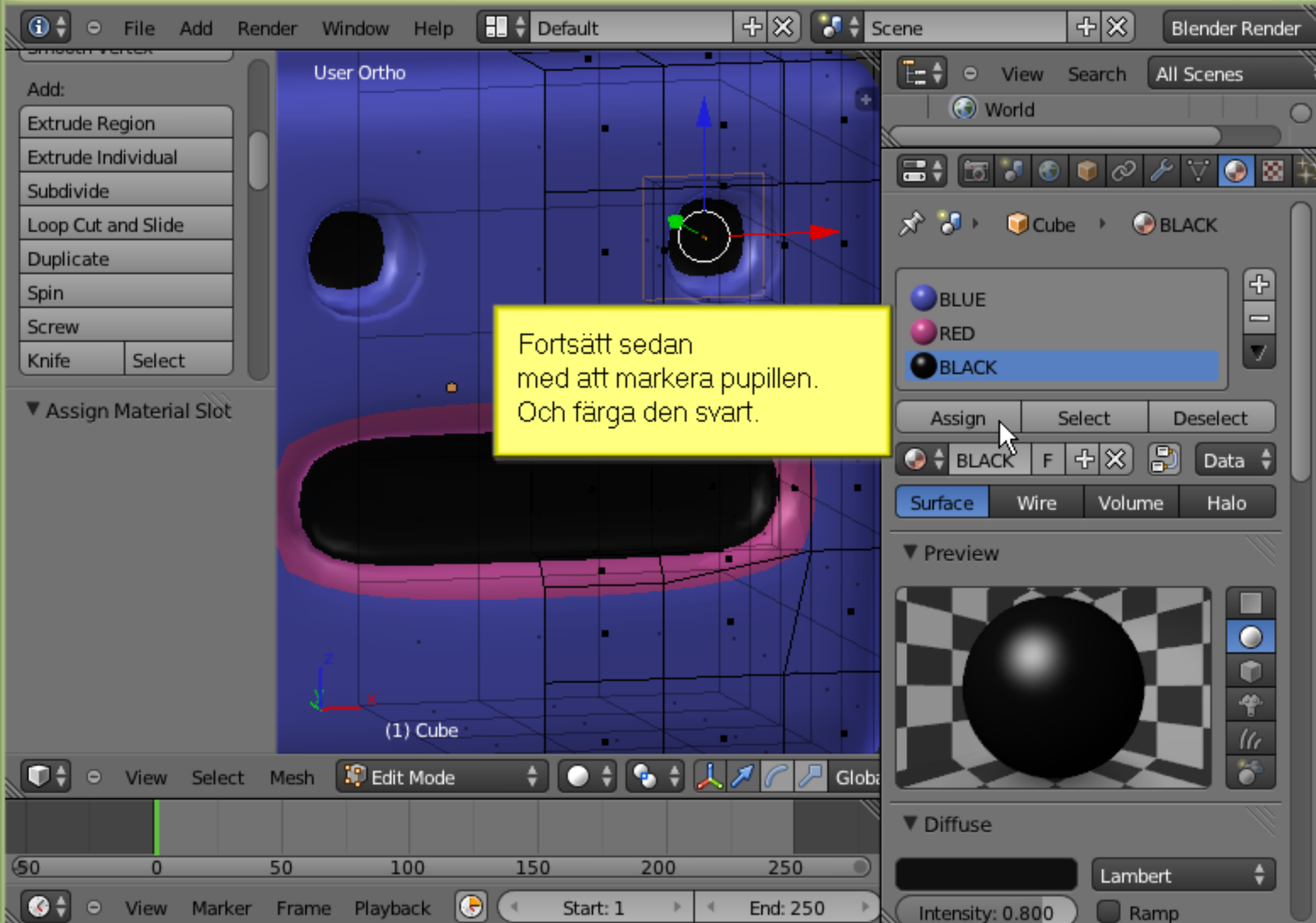
- Top Bar:** File, Add, Render, Window, Help. Default, Scene, Blender Render.
- Left Panel:** Add: Extrude Region, Extrude Individual, Subdivide, Loop Cut and Slide, Duplicate, Spin, Screw, Knife, Select. Assign Material Slot.
- Right Panel:** View, Search, All Scenes. World. Cube, BLACK. Assign, Select, Deselect. BLACK, F, +, X, Data. Surface, Wire, Volume, Halo. Preview. Diffuse. Lambert. Intensity: 0.800. Ramp.
- Bottom Bar:** View, Select, Mesh, Edit Mode. Start: 1, End: 250.

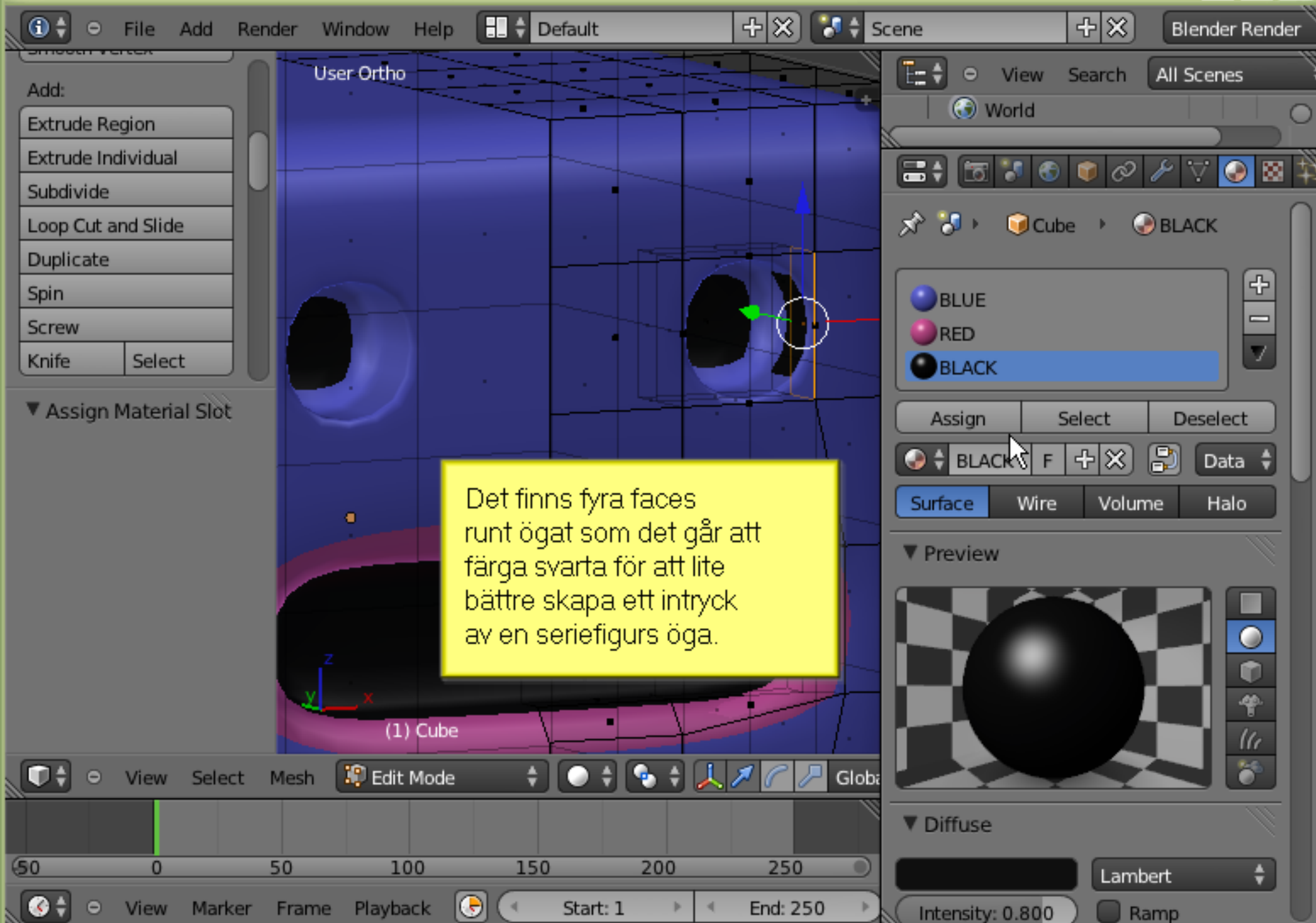
The 3D view shows a blue sphere with a pink ring. A black cube is positioned in the center of the ring. A yellow text box is overlaid on the sphere, providing instructions in Swedish.

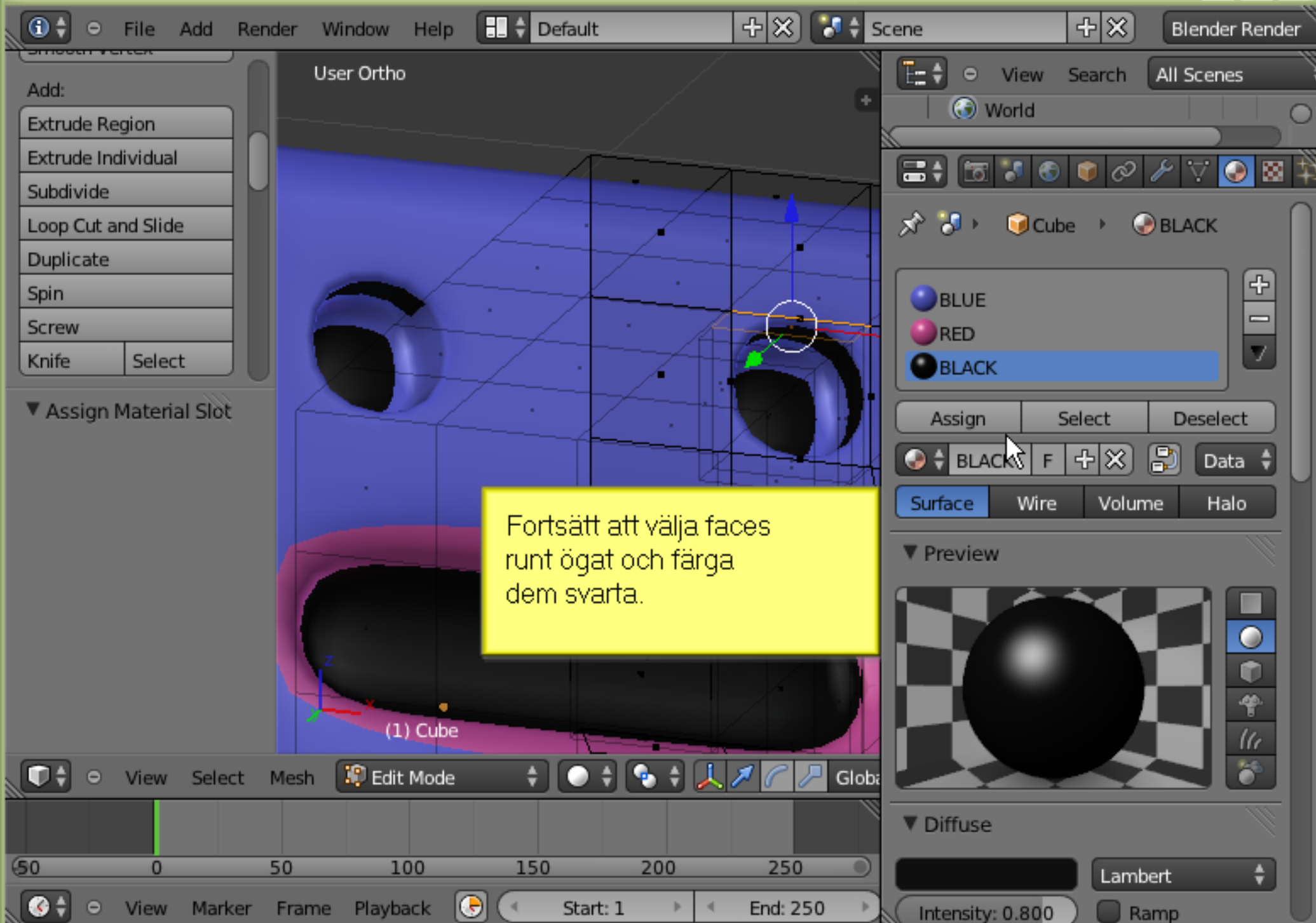


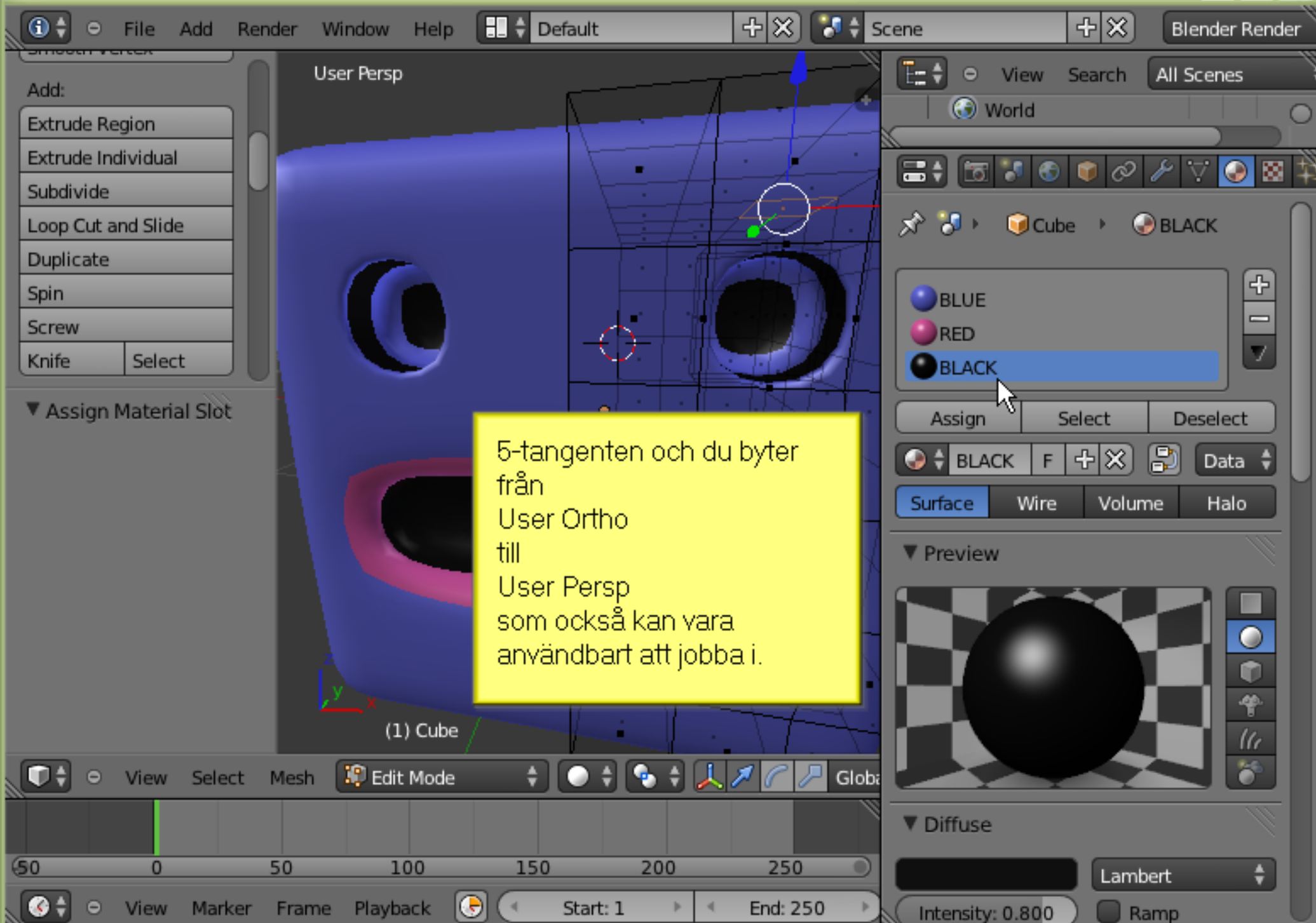




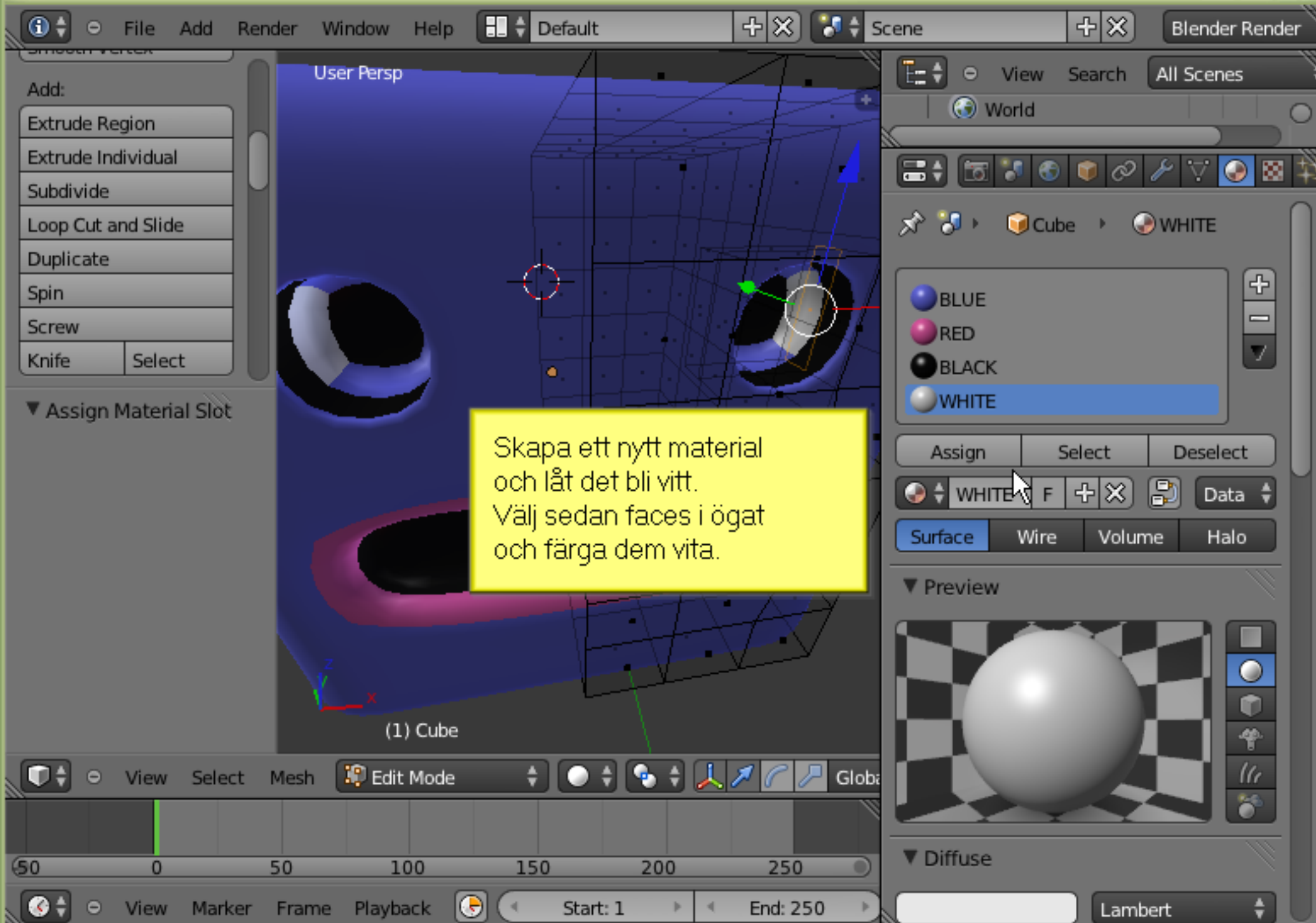


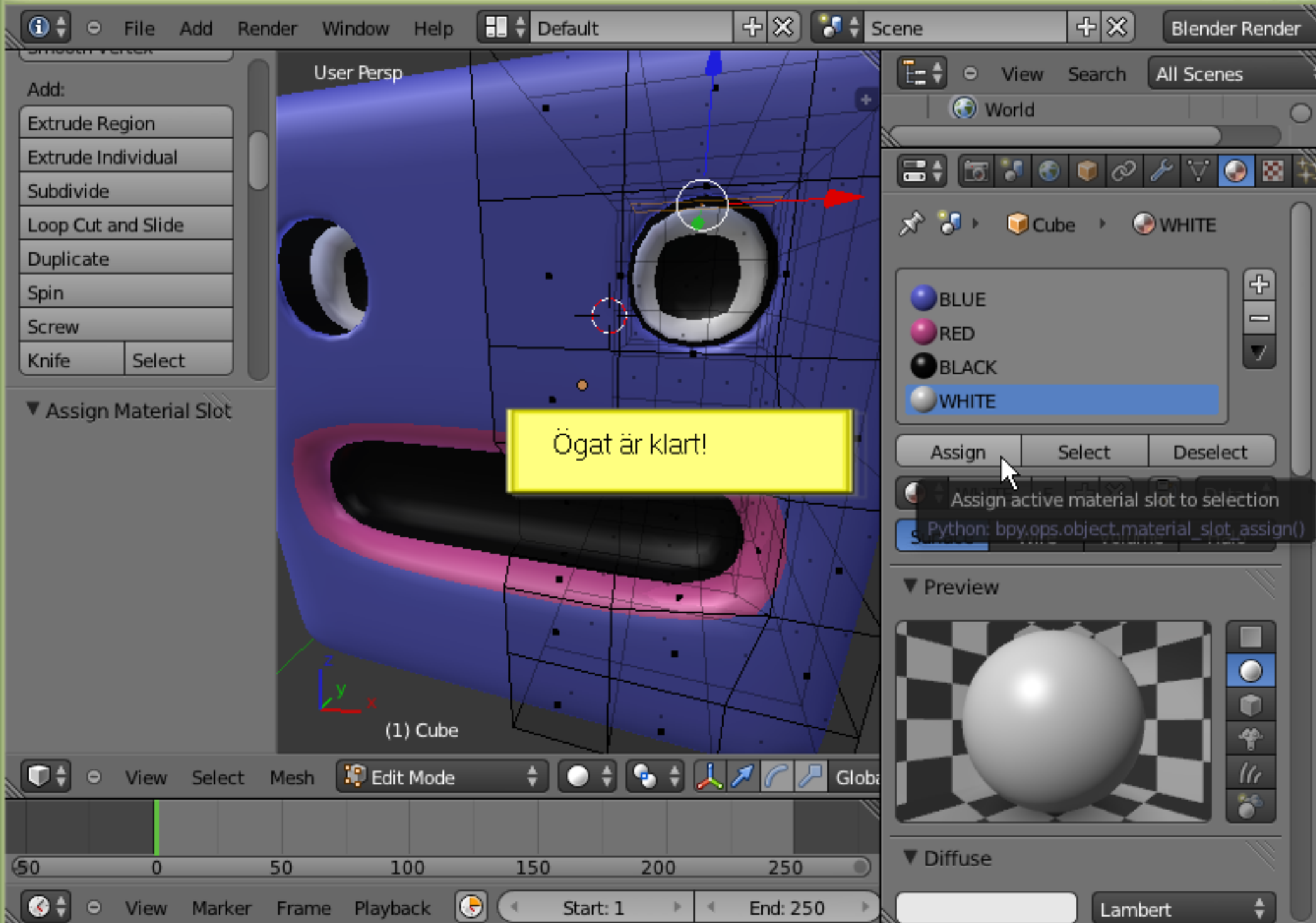


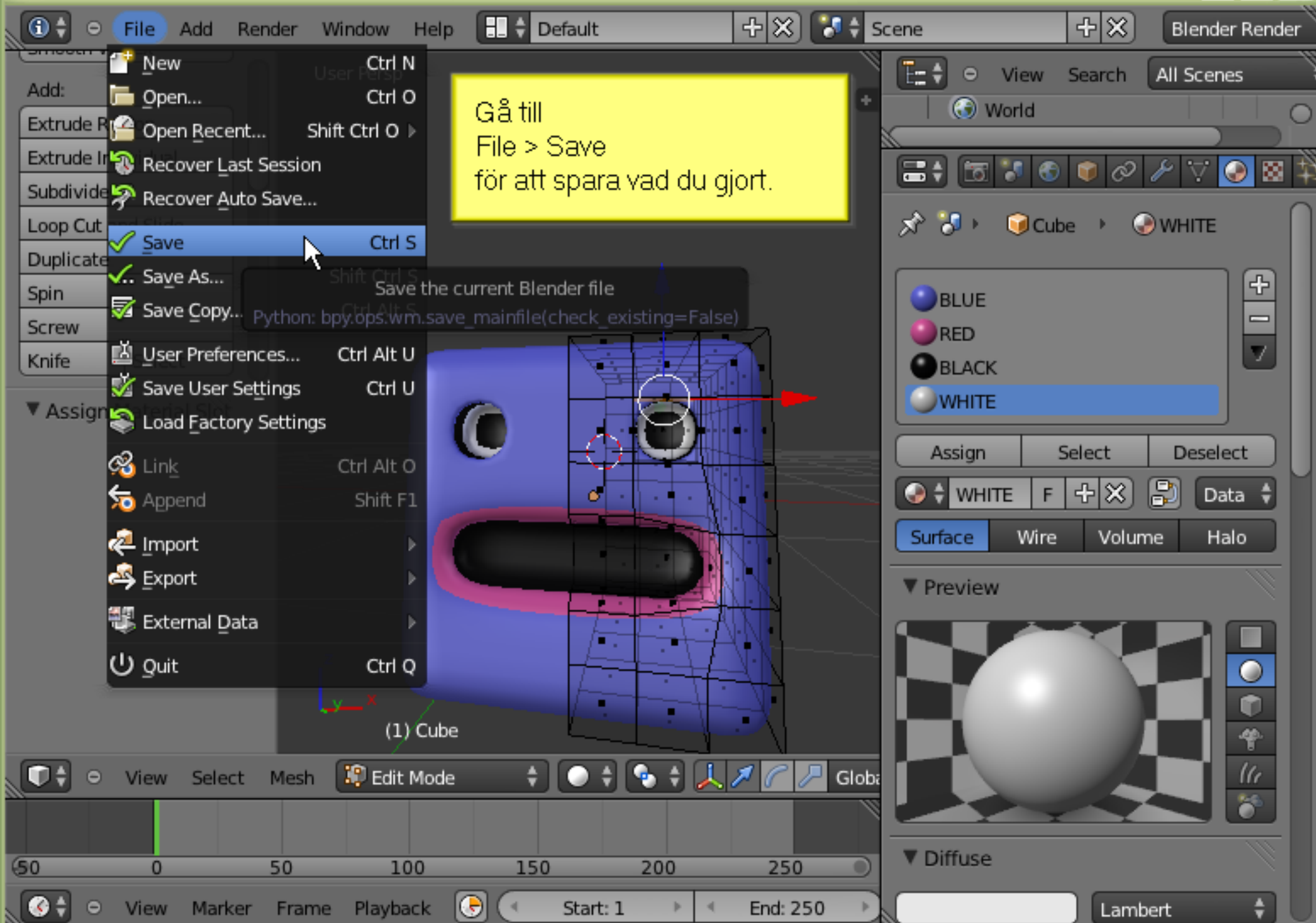


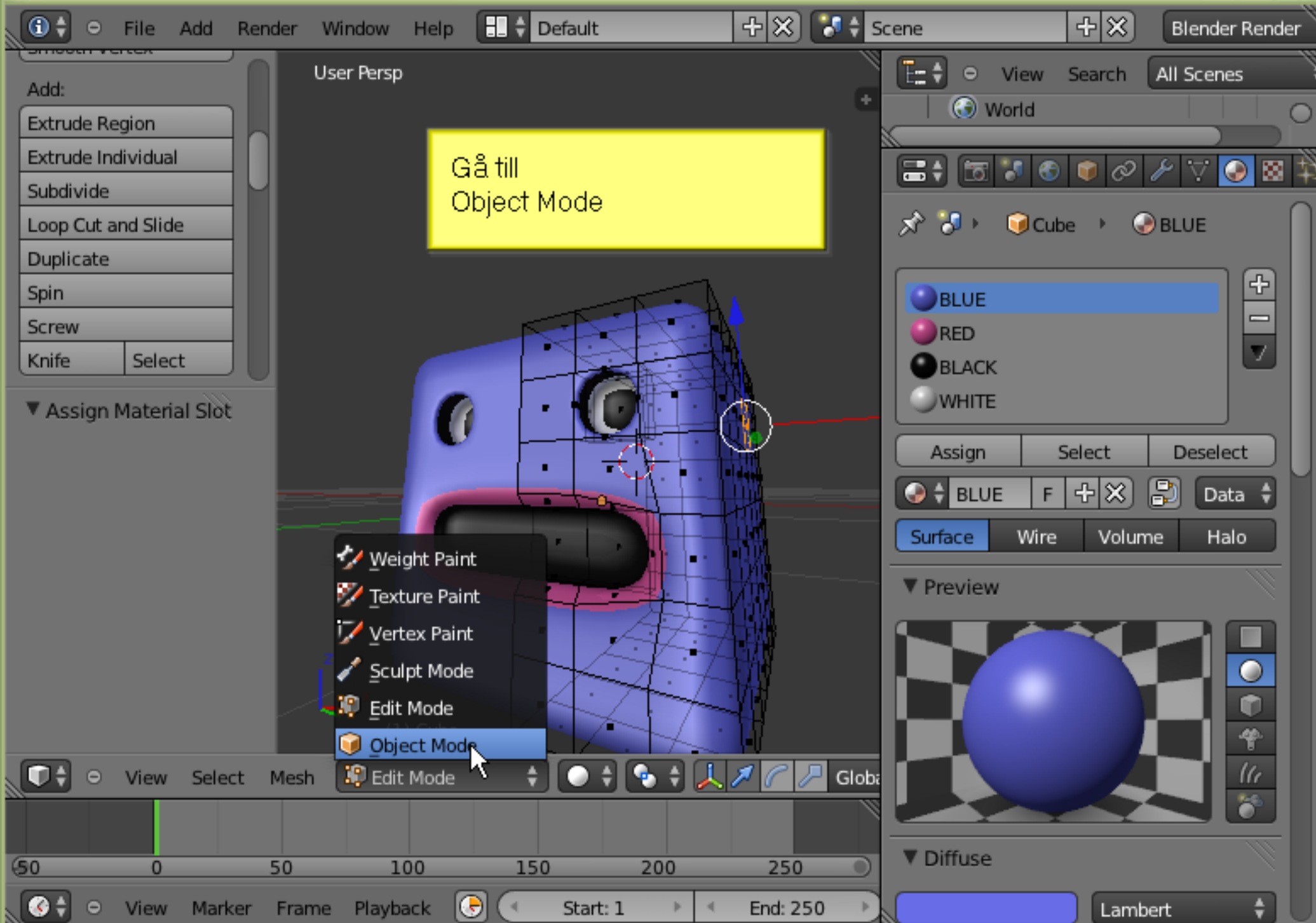


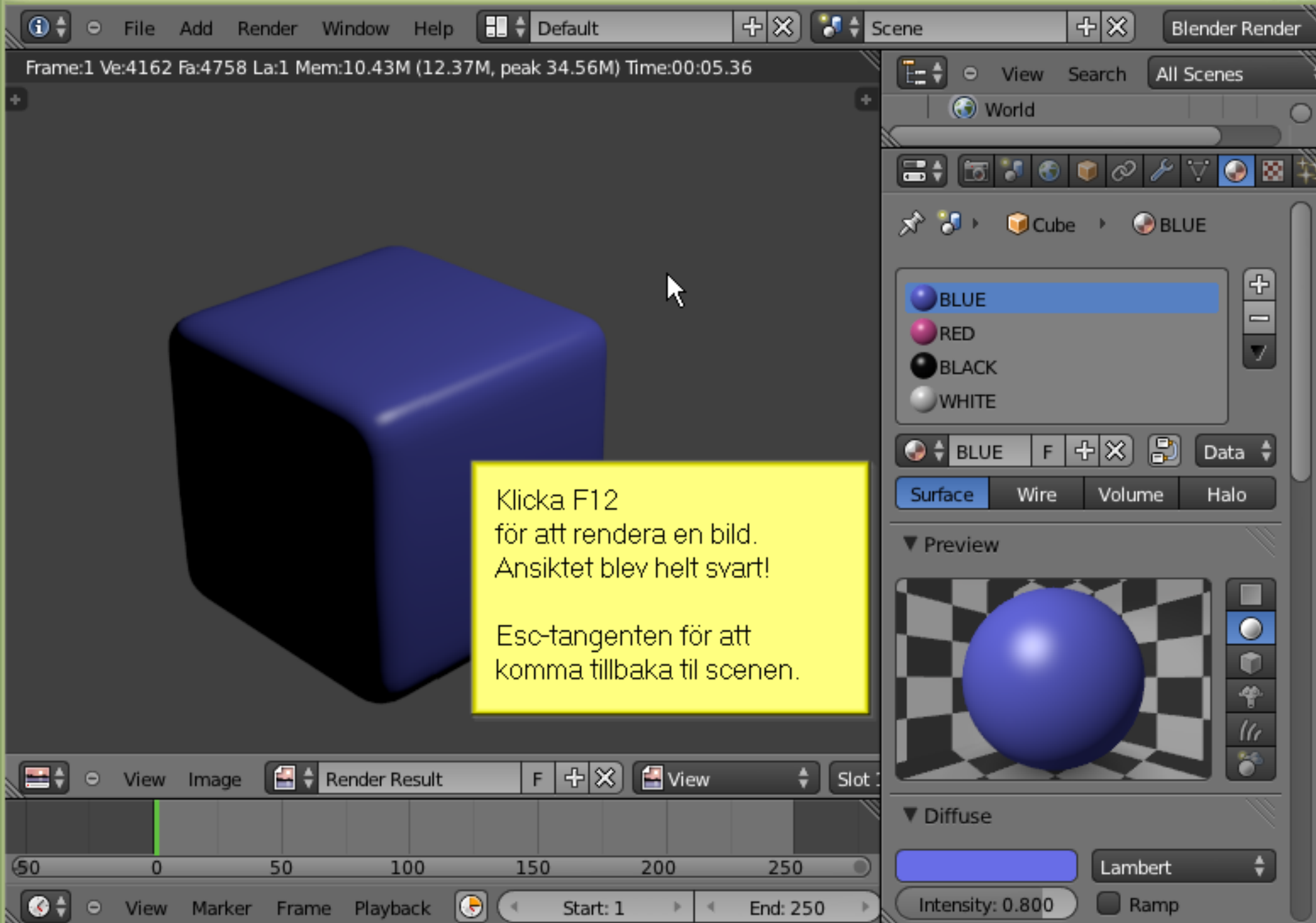
5-tangenten och du byter
från
User Ortho
till
User Persp
som också kan vara
användbart att jobba i.











Blender interface showing the **Add** menu open, highlighting the **Lamp** category and the **Point** lamp type. The viewport shows a 3D scene with a cube and a camera. The Properties panel on the right shows the **World** settings, including a **Preview** of a blue sphere and a **Diffuse** color bar.

Add menu options:

- Mesh
- Curve
- Surface
- Metaball
- Text
- Armature
- Lattice
- Empty
- Speaker
- Camera
- Lamp**
 - Point** (selected)
 - Sun
 - Spot
 - Hemi
 - Area
- Force Field
- Group Instance

Tooltip for **Point** lamp:

Add a lamp object to the scene
Python: `bpy.ops.object.lamp_add()`

Viewport text: (1) Cube

Properties panel text:

World

Preview

Diffuse

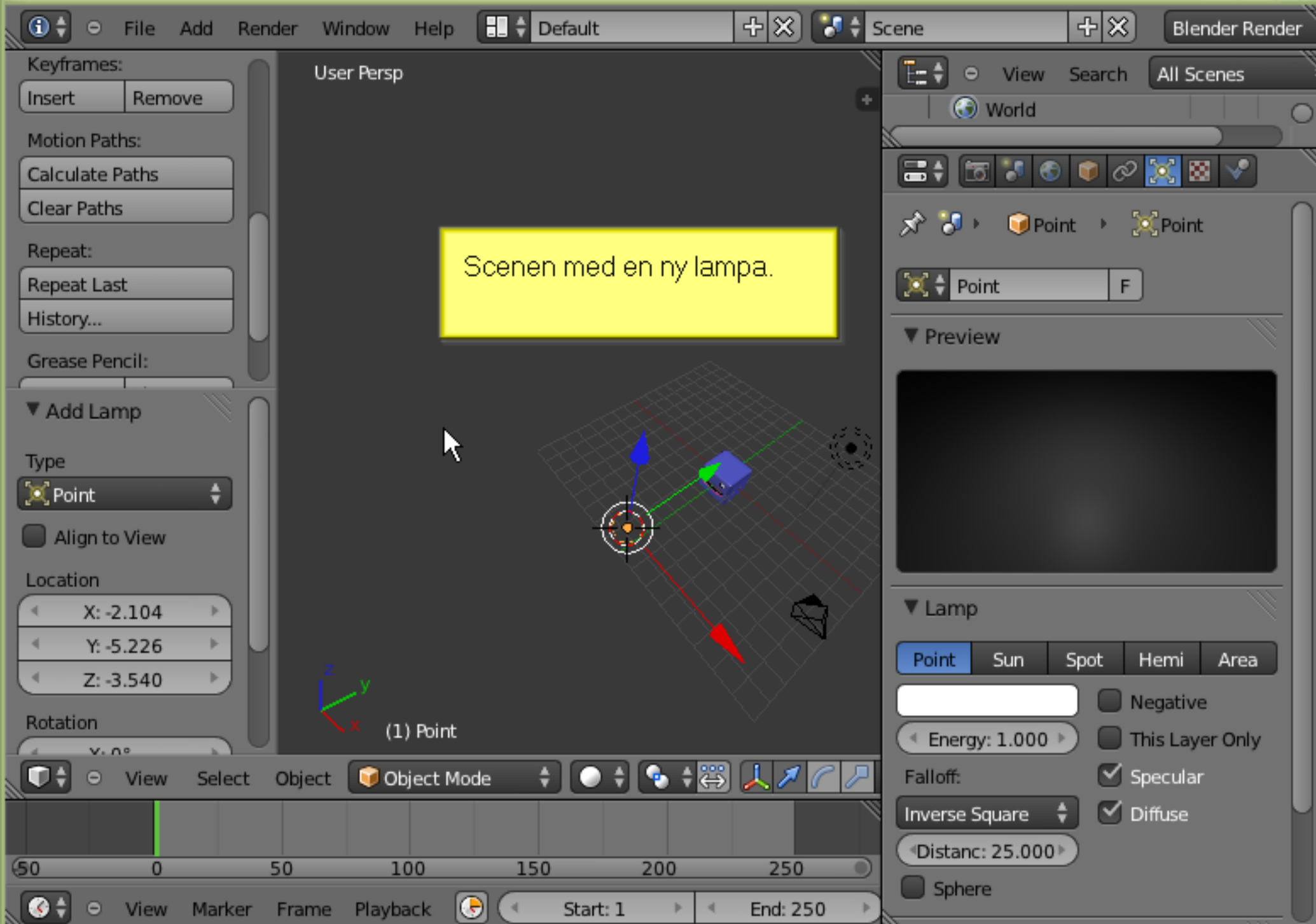
Intensity: 0.800

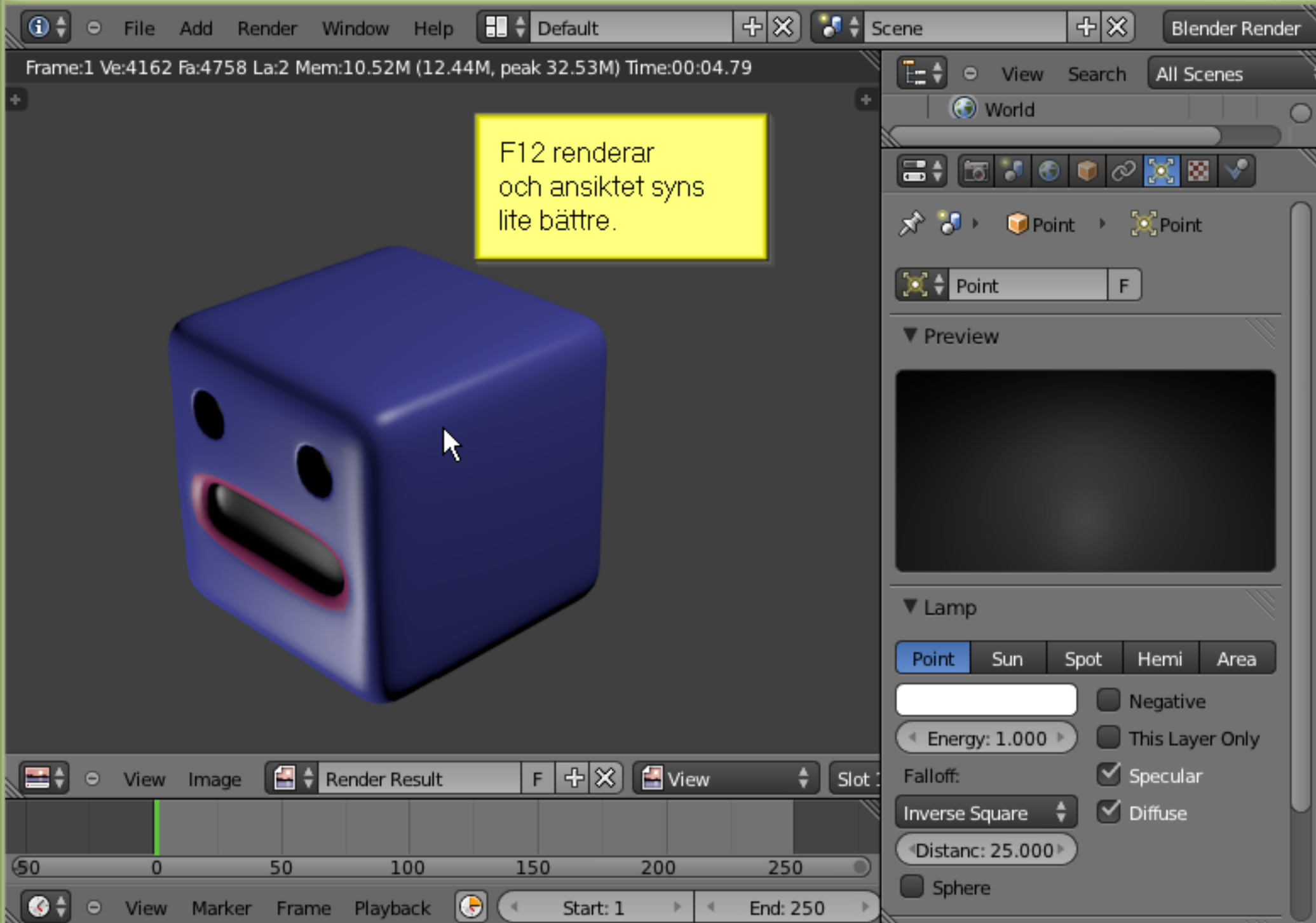
Lambert

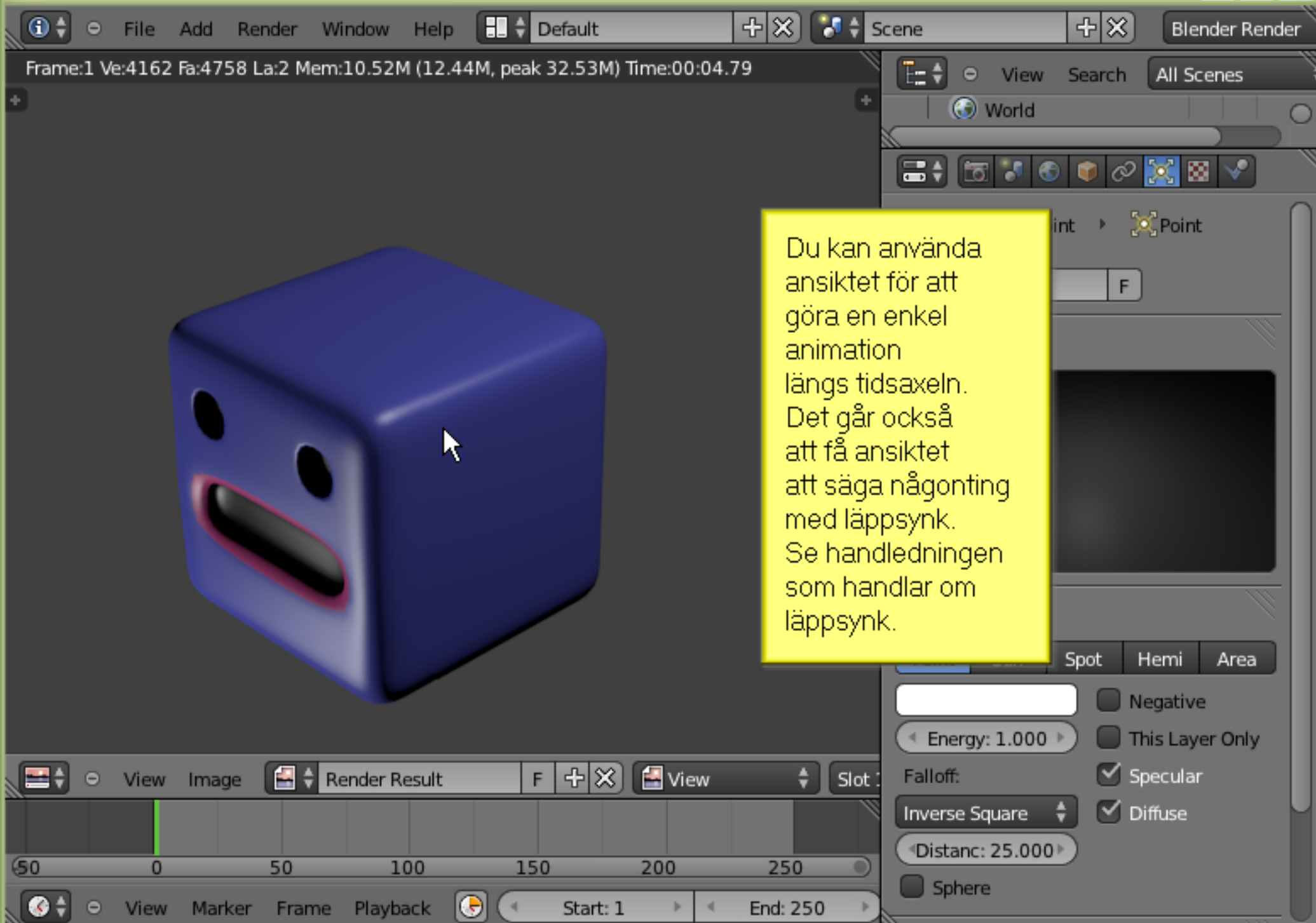
Ramp

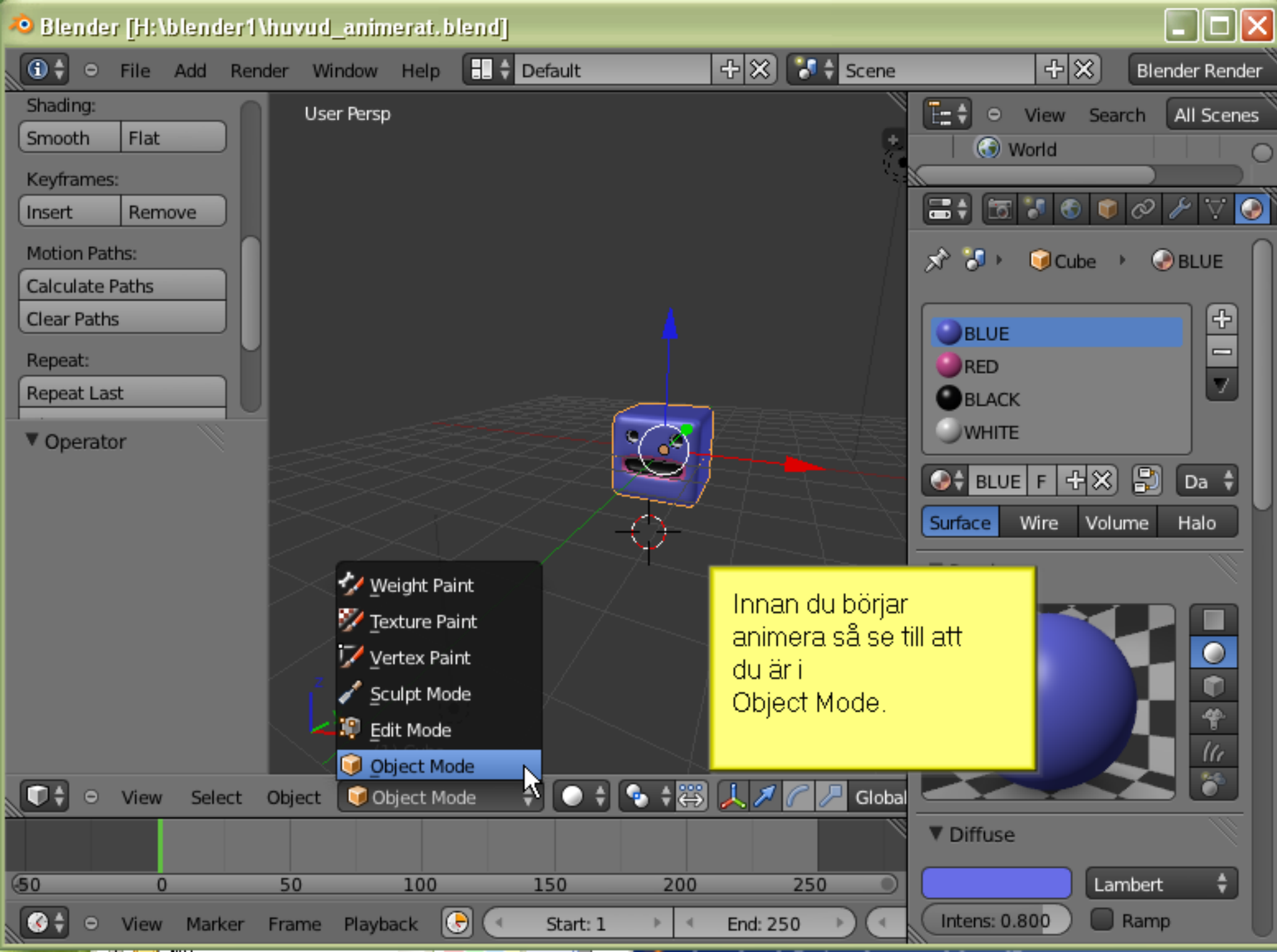
Vänster mustangent
och klicka på scenen
någonstans mellan kameran
och ansiktet på en plats
lämplig för en ny lampa.

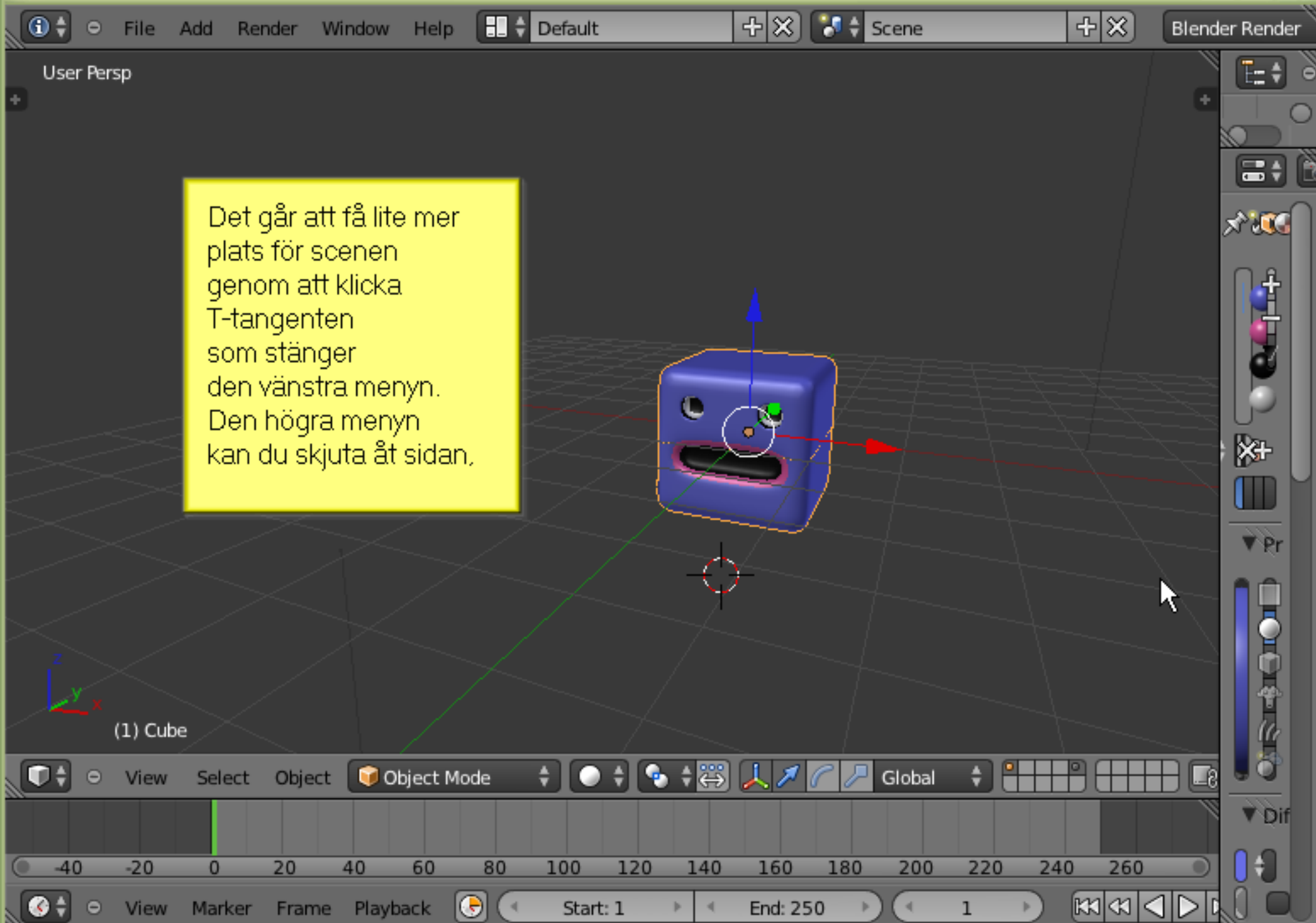
Och sen
Add > Lamp > Point

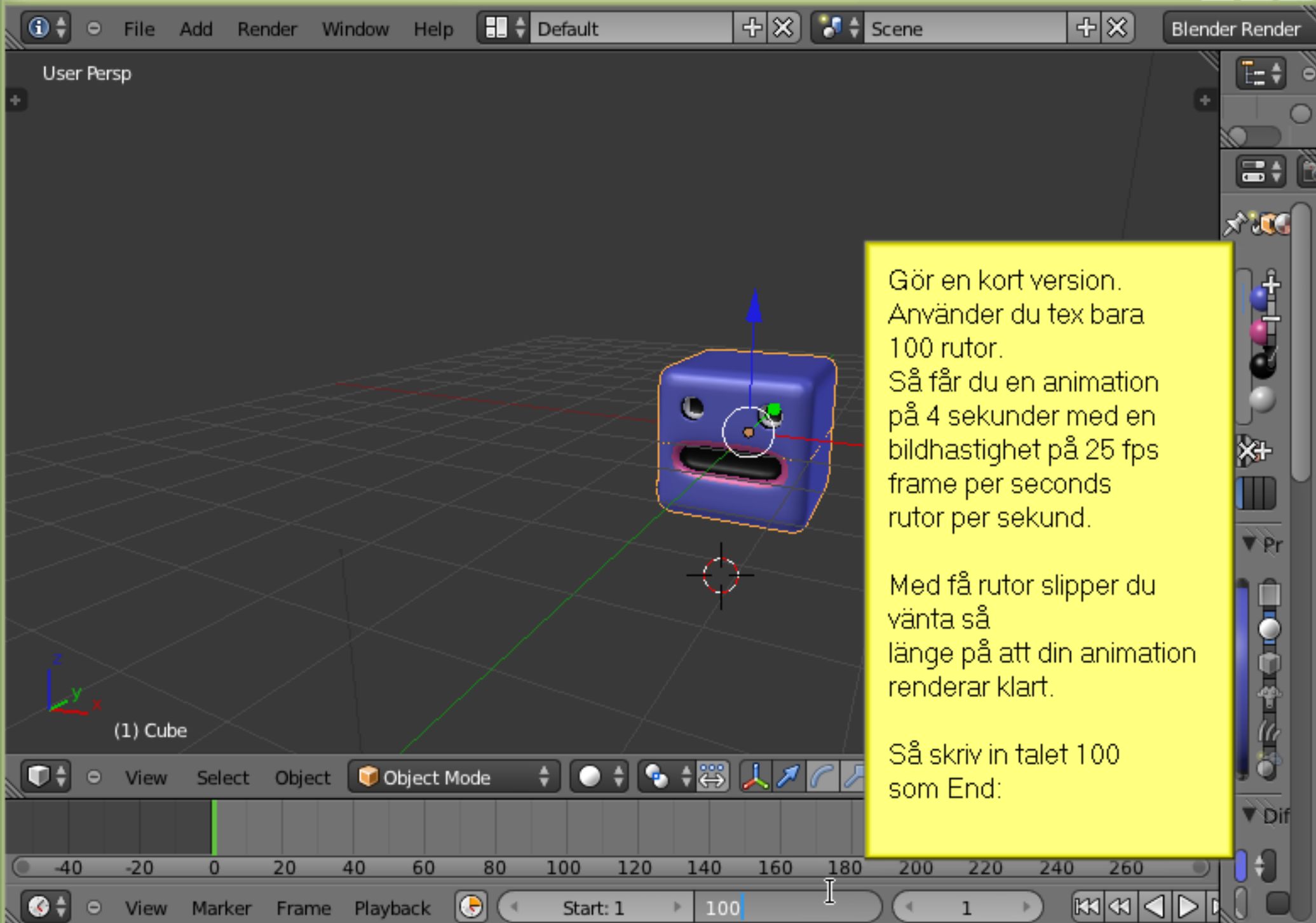












Gör en kort version.
Använder du tex bara
100 rutor.
Så får du en animation
på 4 sekunder med en
bildhastighet på 25 fps
frame per seconds
rutor per sekund.

Med få rutor slipper du
vänta så
länge på att din animation
renderar klart.

Så skriv in talet 100
som End:



File Add Render Window Help



Default



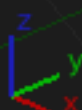
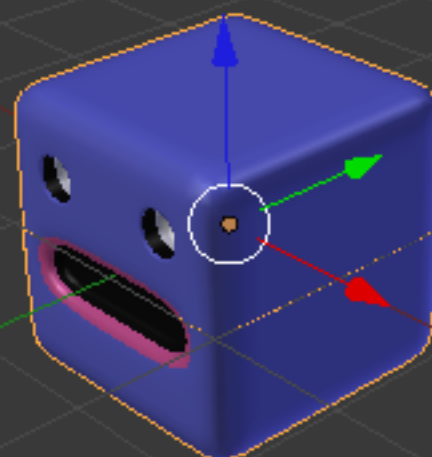
Scene



Blender Render

Camera Persp

Klicka på 0-tangenten
för att komma till kameravyn
och se vad kameran ser.



(1) Cube



View Select Object



Object Mode



Global

-40 -20 0 20 40 60 80 100 120 140 160 180 200 220 240 260



View Marker Frame Playback

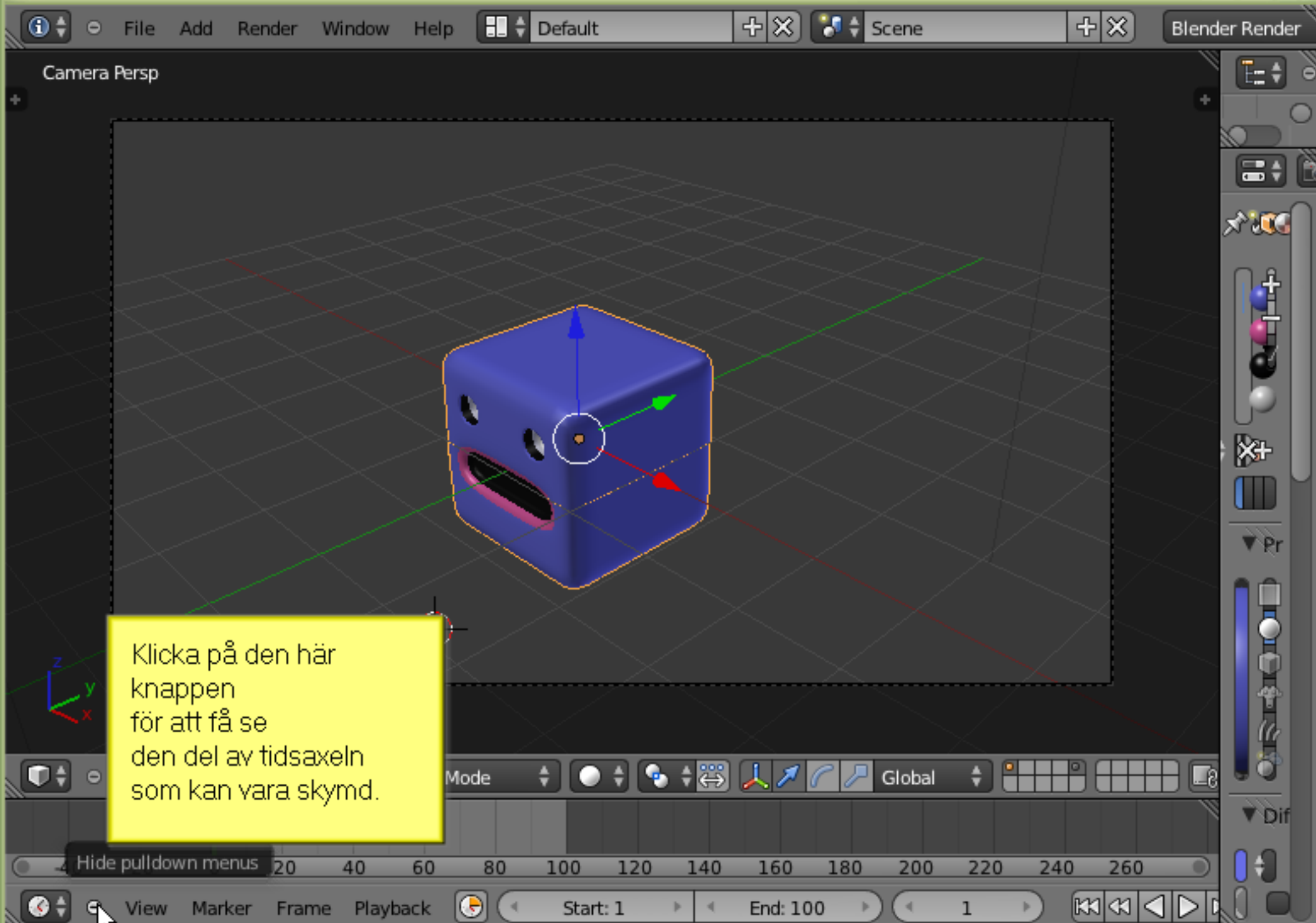


Start: 1

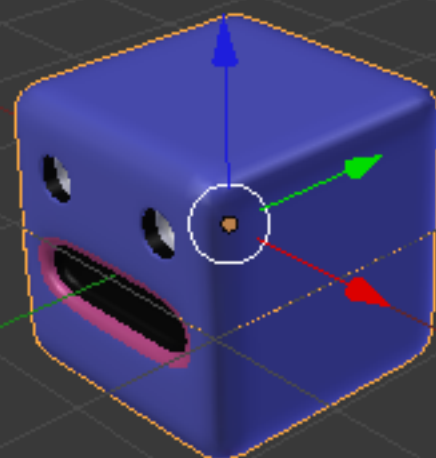
End: 100

1





Camera Persp



Så här ser den skymda delen ut. Klickar du knappen igen så kommer du tillbaka till den förra delen.

Automatic keyframe insertion for Objects and Bones
Python: ToolSettings.use_keyframe_insert_auto

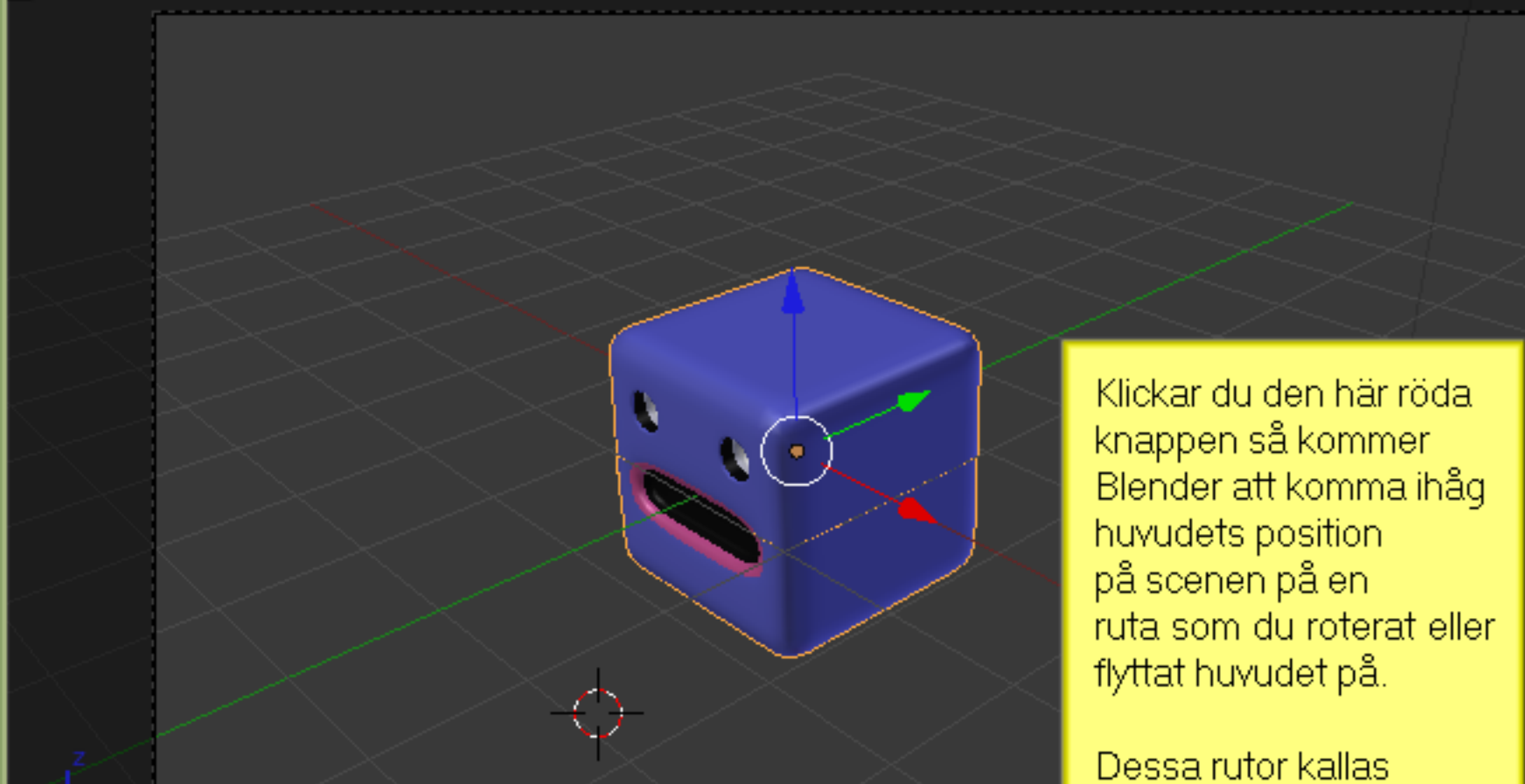
Start: 1

End: 100

1

No Sync

Camera Persp

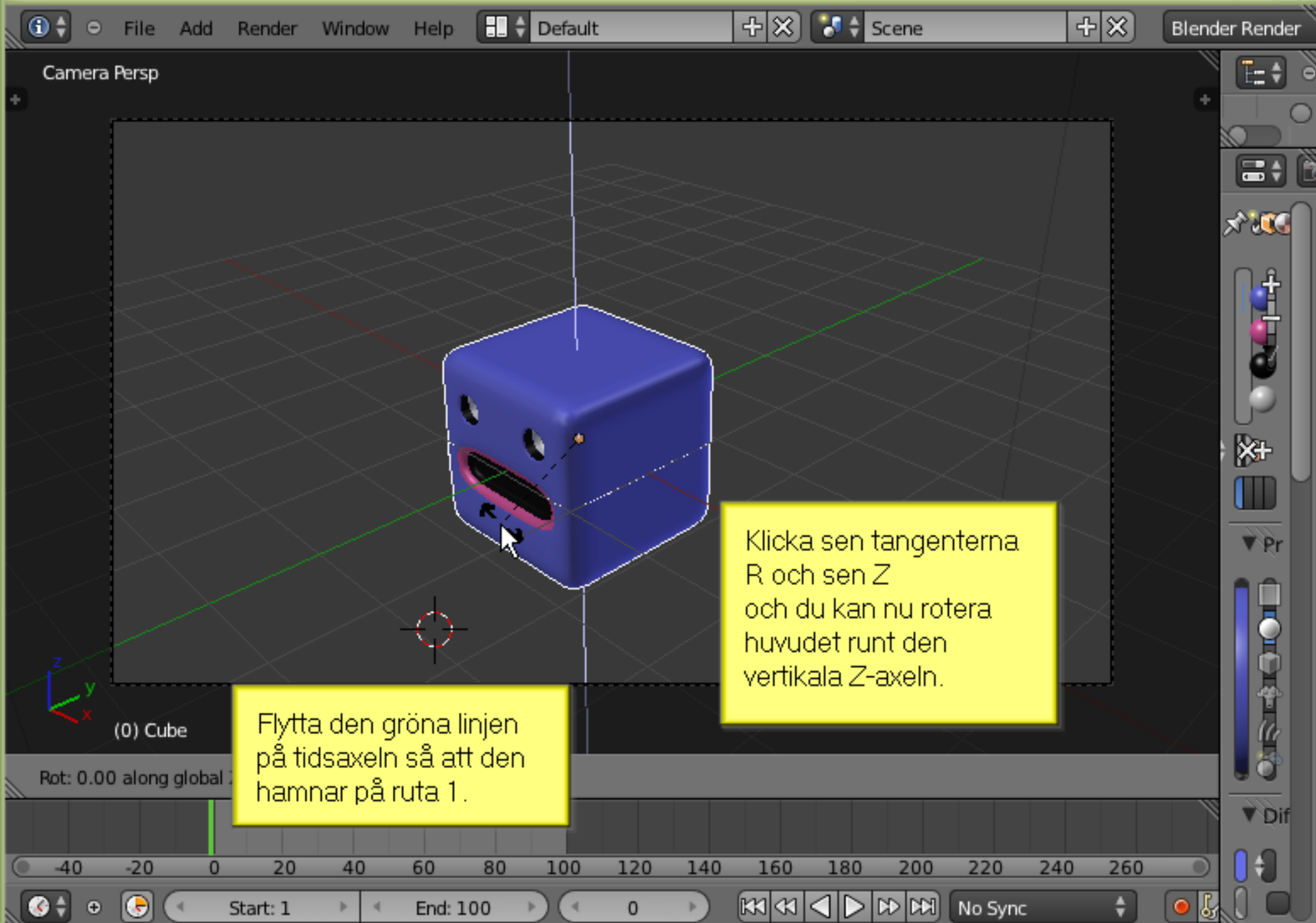


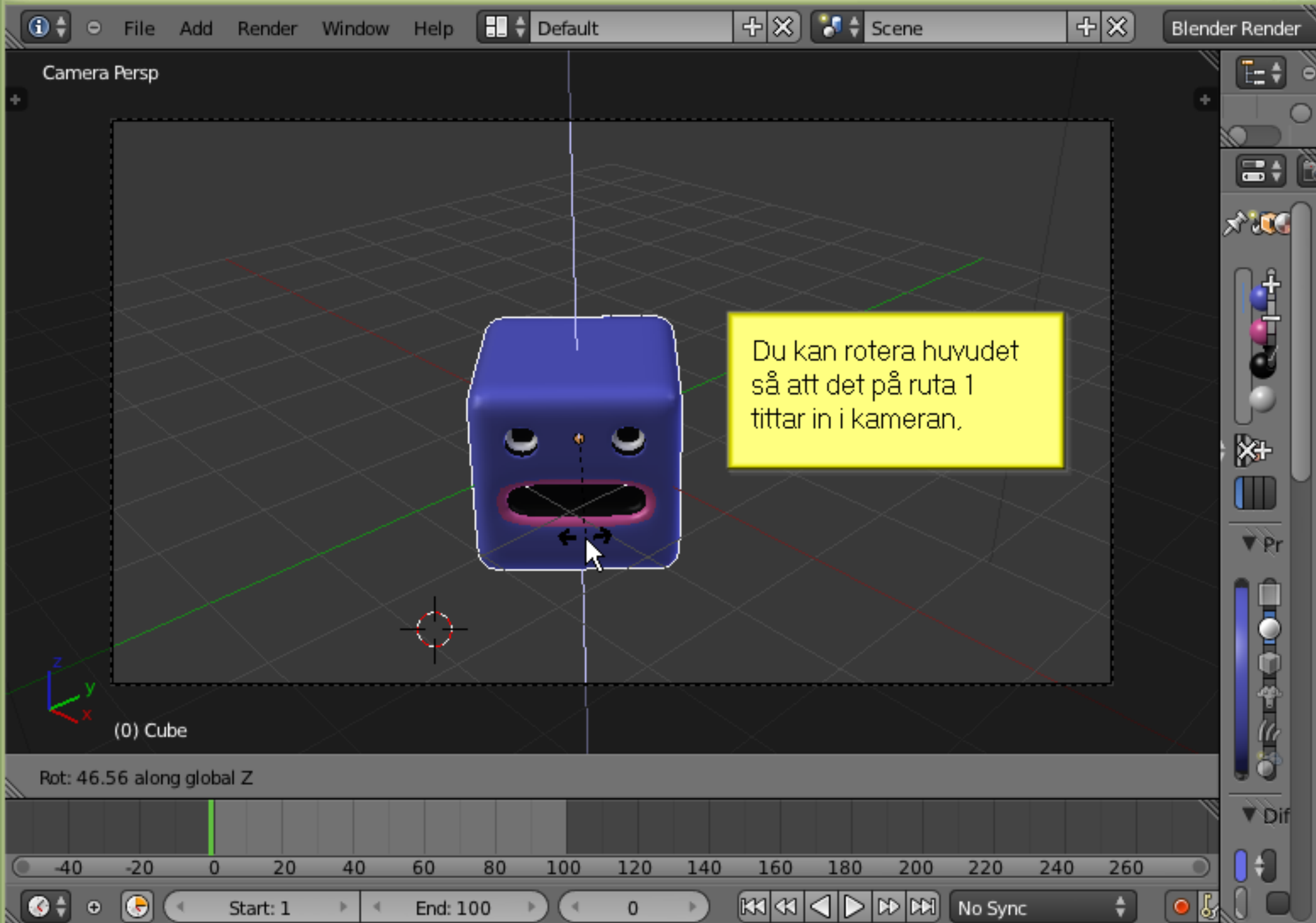
Klickar du den här röda knappen så kommer Blender att komma ihåg huvudets position på scenen på en ruta som du roterat eller flyttat huvudet på.

Dessa rutor kallas för nyckelbilsrutor eller på engelska Keyframes.

(1) Cube

View Select Object Object Mode







File Add Render Window Help



Default



Scene



Blender Render

Camera Persp



Flytta sen den gröna
linjen på tidsaxeln
till någon ruta
tex ruta 20
Och du ser att ruta 1
fått en gul linje
som visar att ruta 1
är en nyckelbilsruta
alltså en ruta där
Blender har lagt
huvudets position
på minnet.

(20) Cube



View

Select

Object



Object Mode



Global



-40

-20

0

20

40

60

80

100

120

140

160

180

200

220

240

260

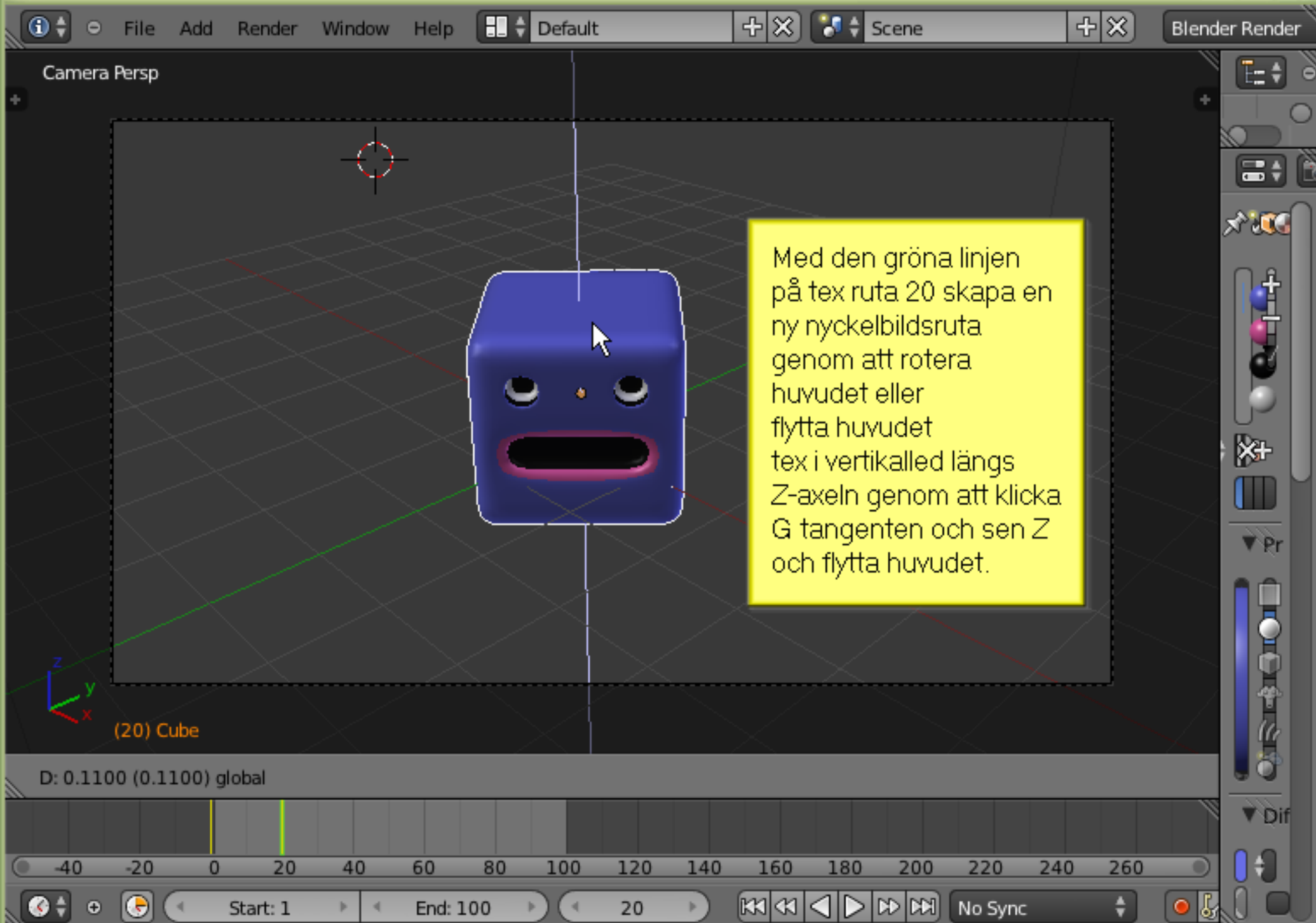
Start: 1

End: 100

20



No Sync





File

Add

Render

Window

Help



Default

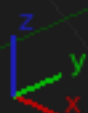


Scene



Blender Render

Camera Persp



(20) Cube



View

Select

Object

Object Mode



Global

-40

-20

0

20

40

60

80

100

120

140

160

180

200

220

240

260

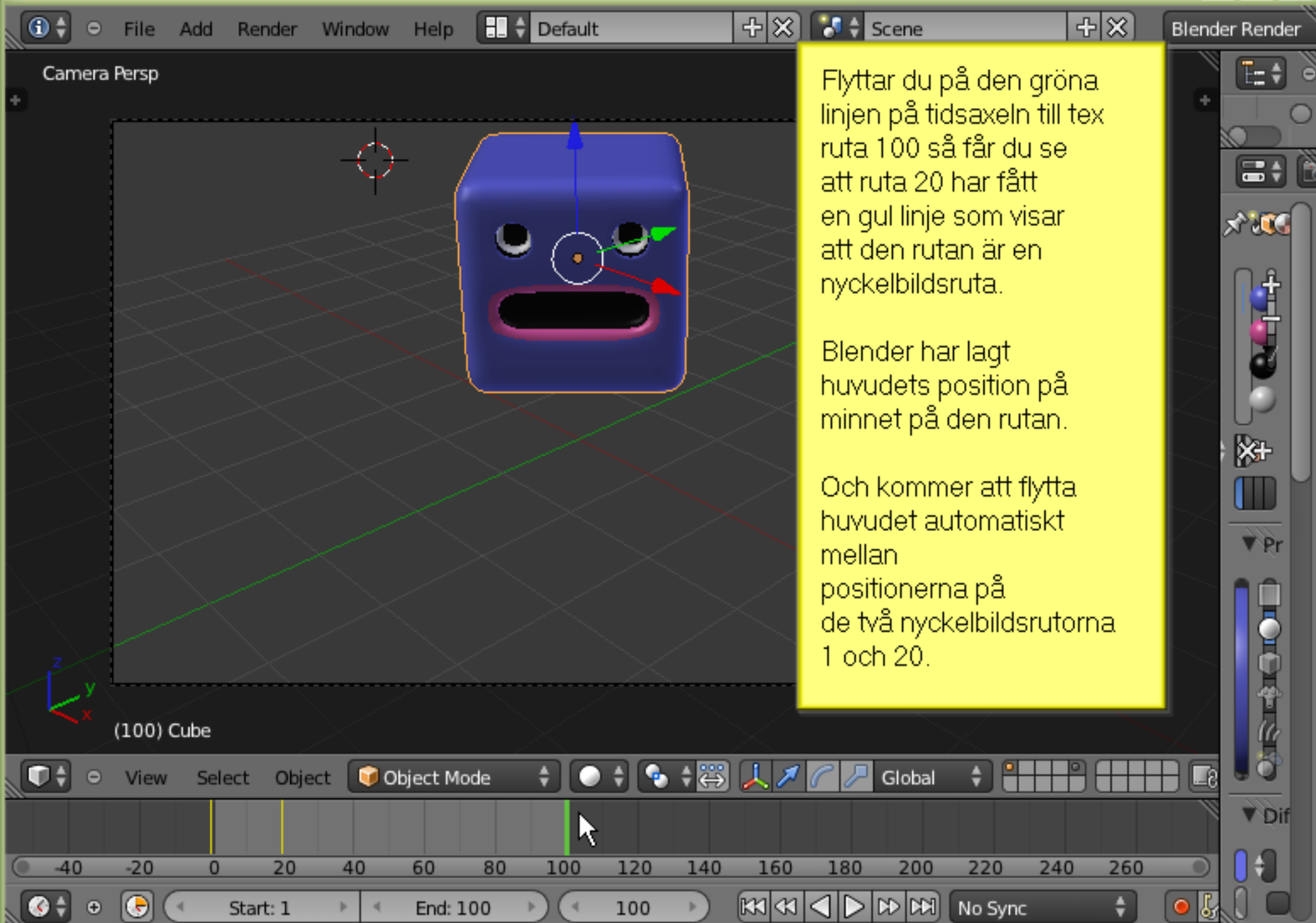
Start: 1

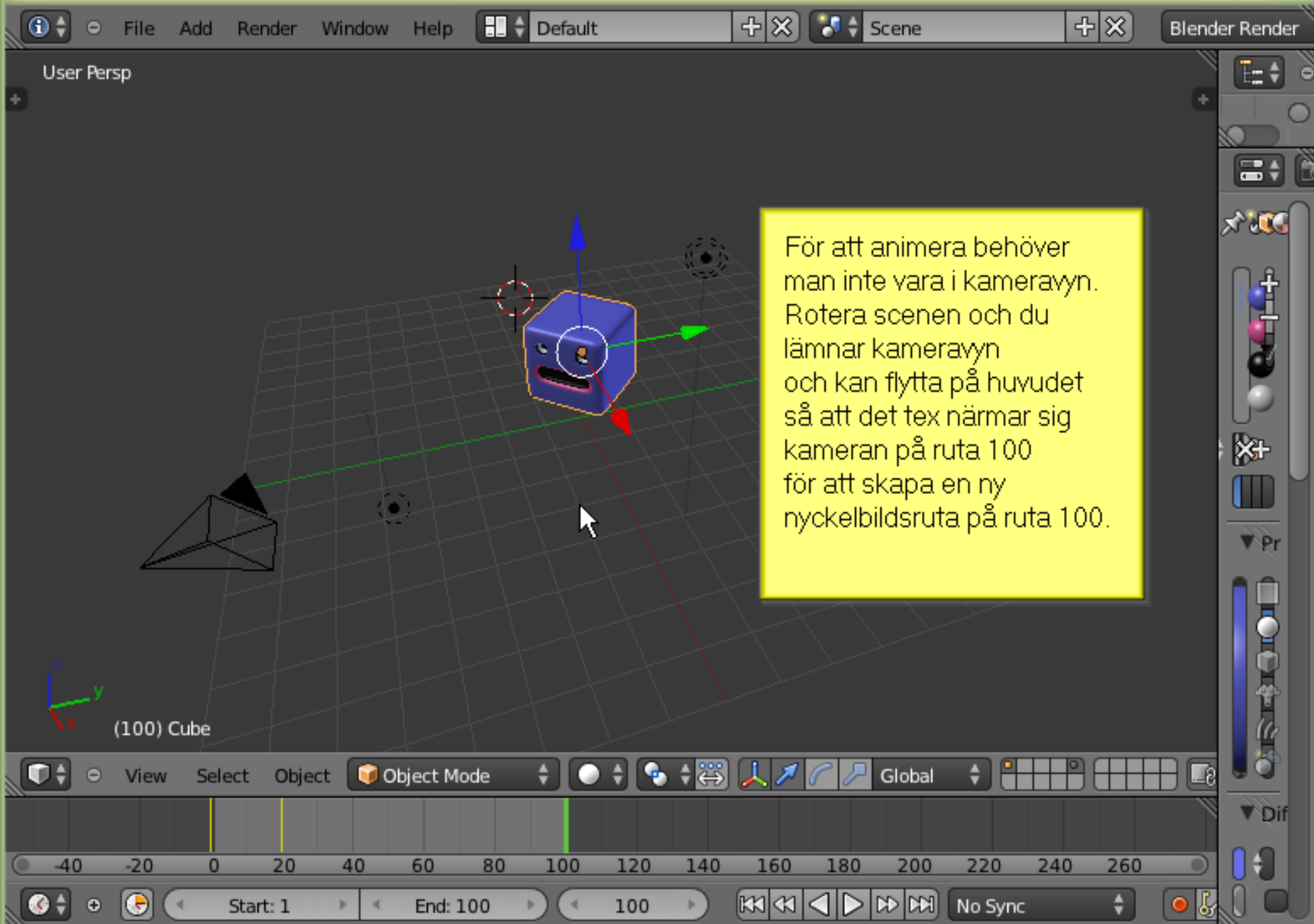
End: 100

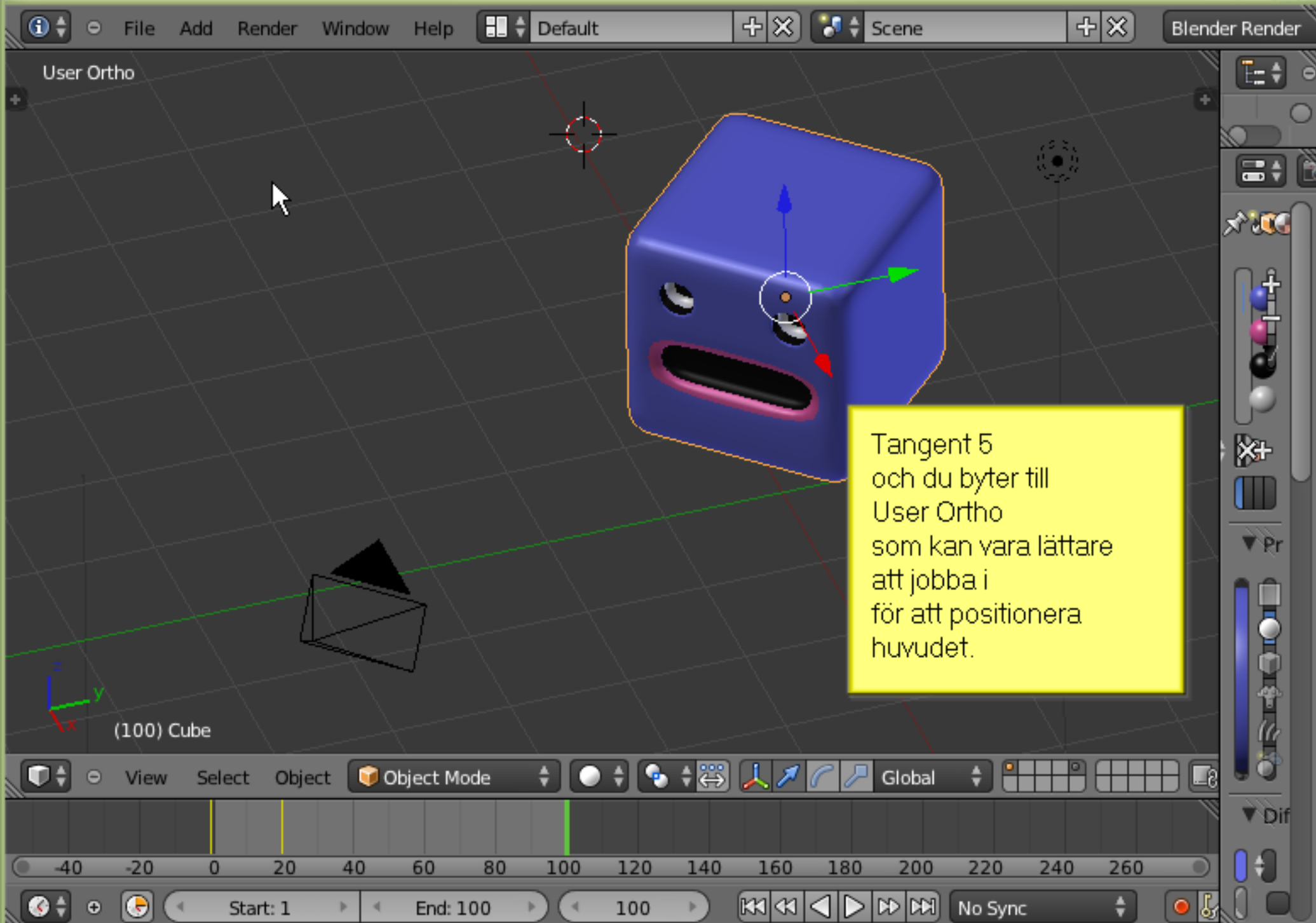
20

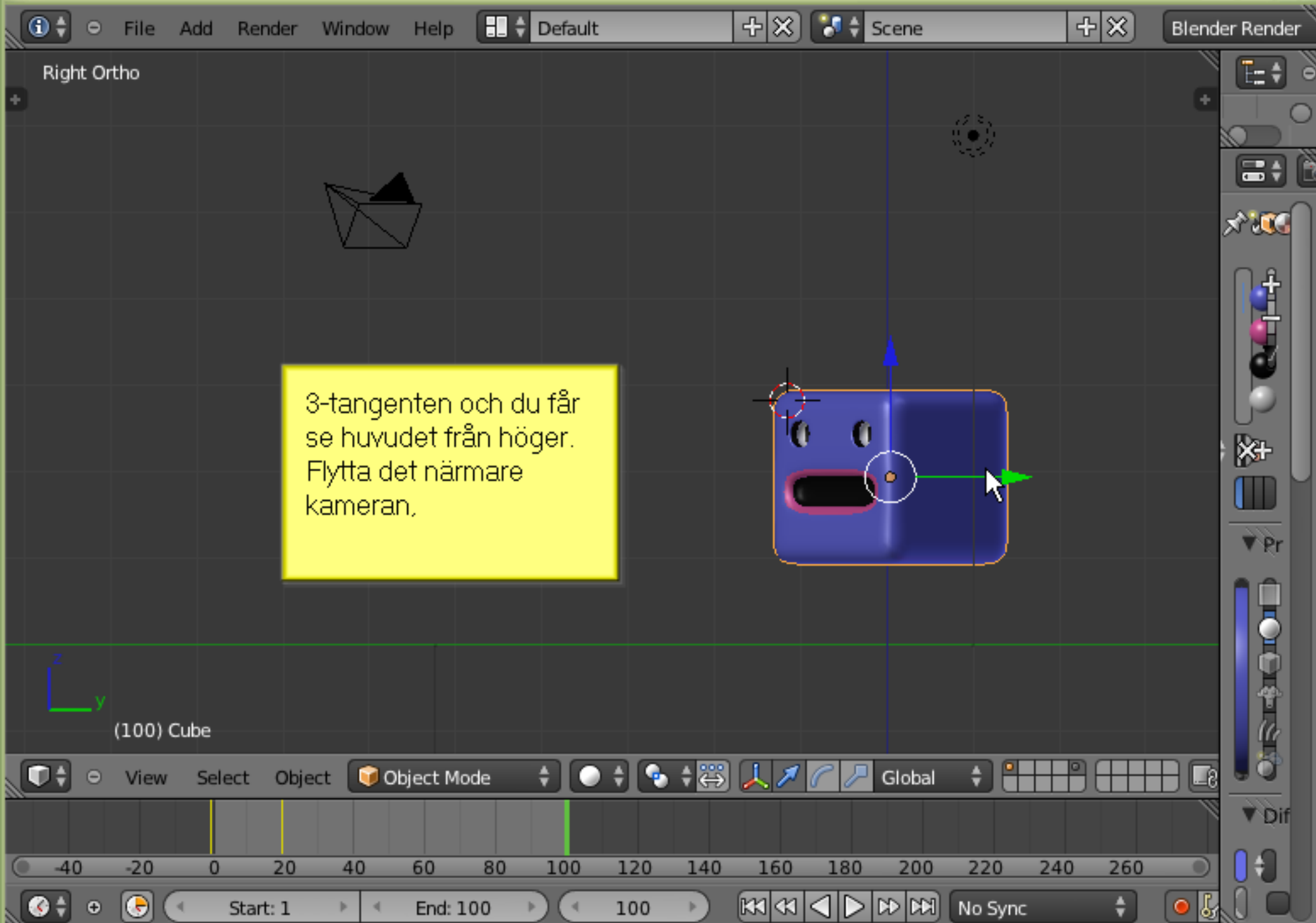


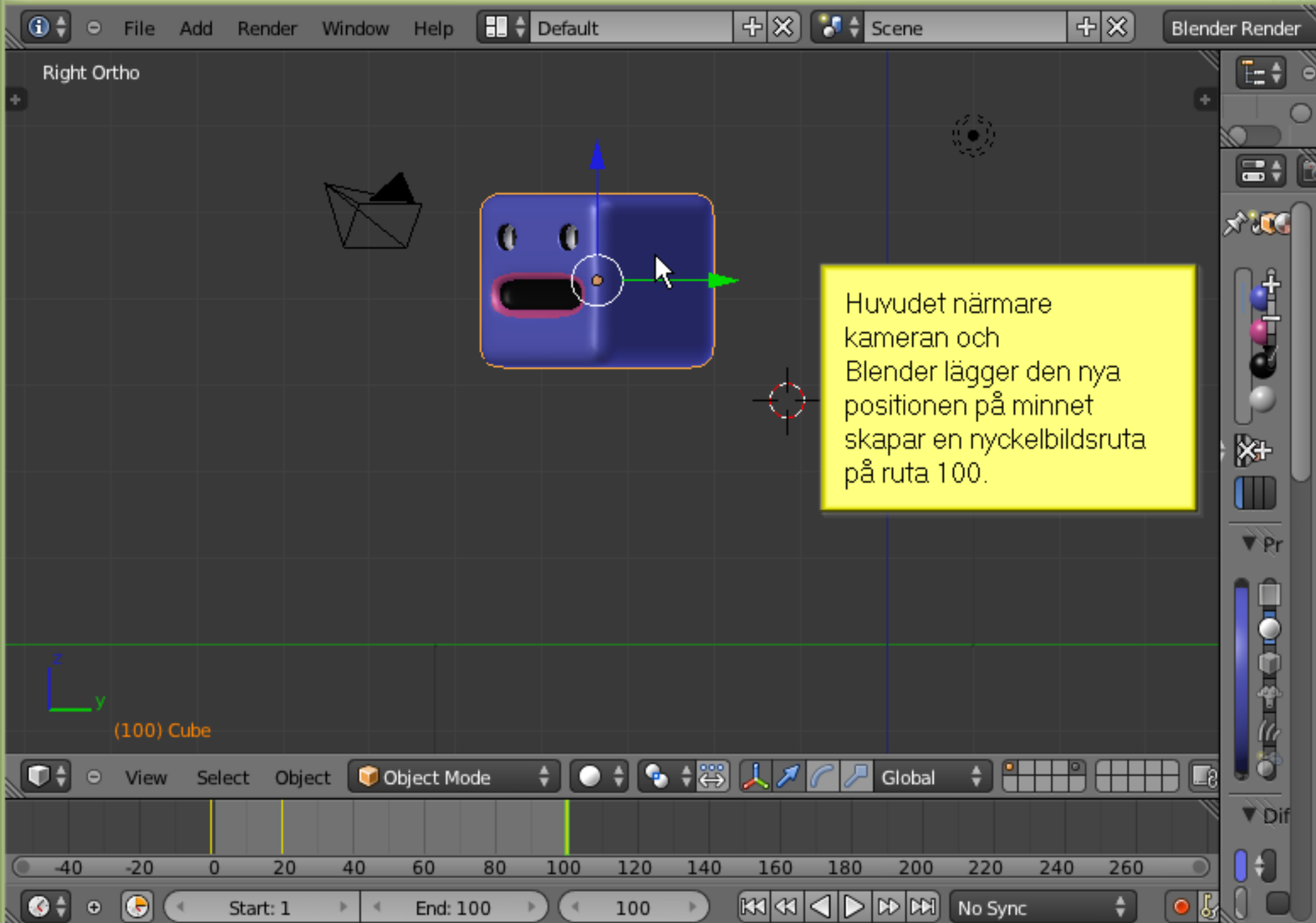
No Sync

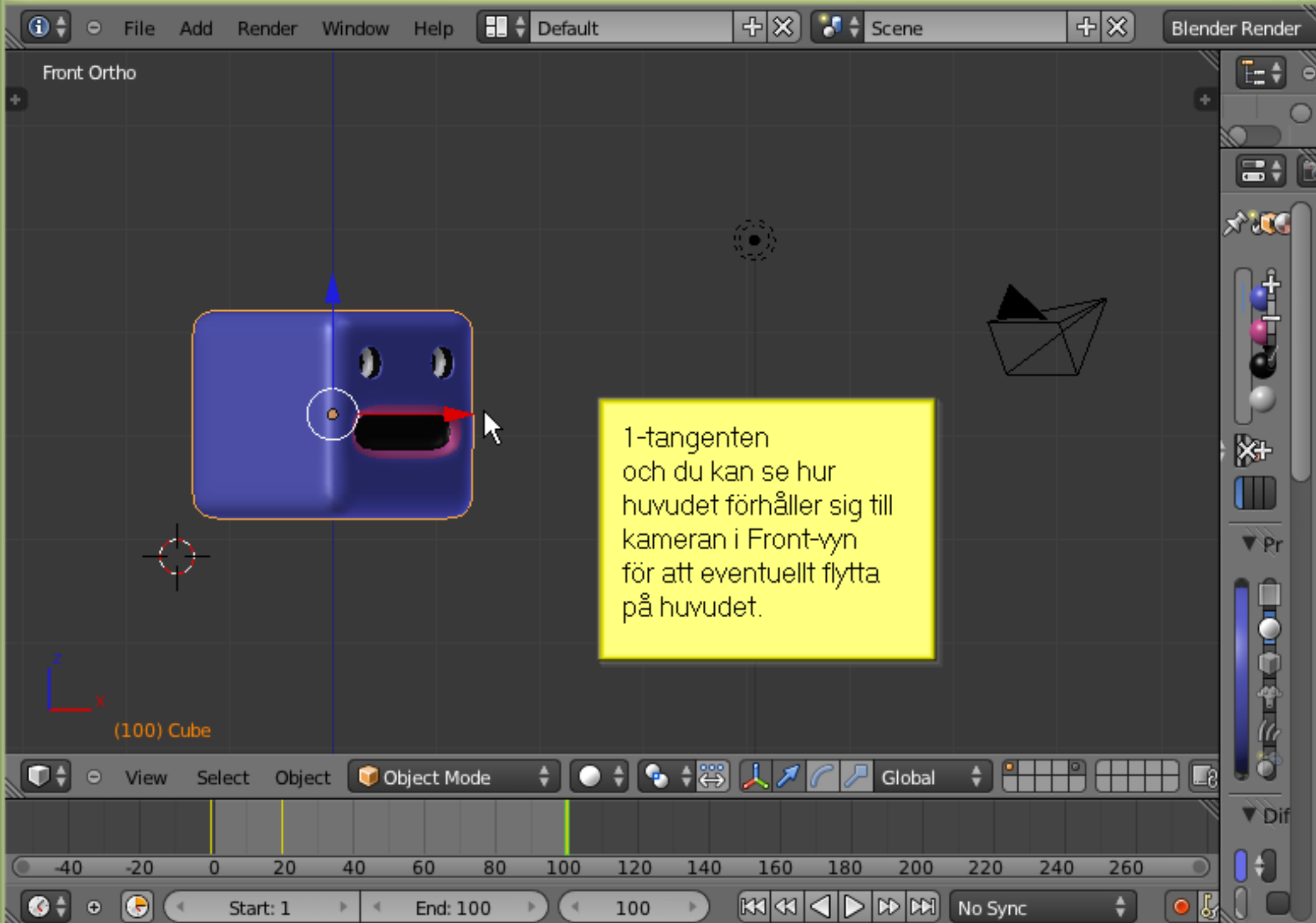


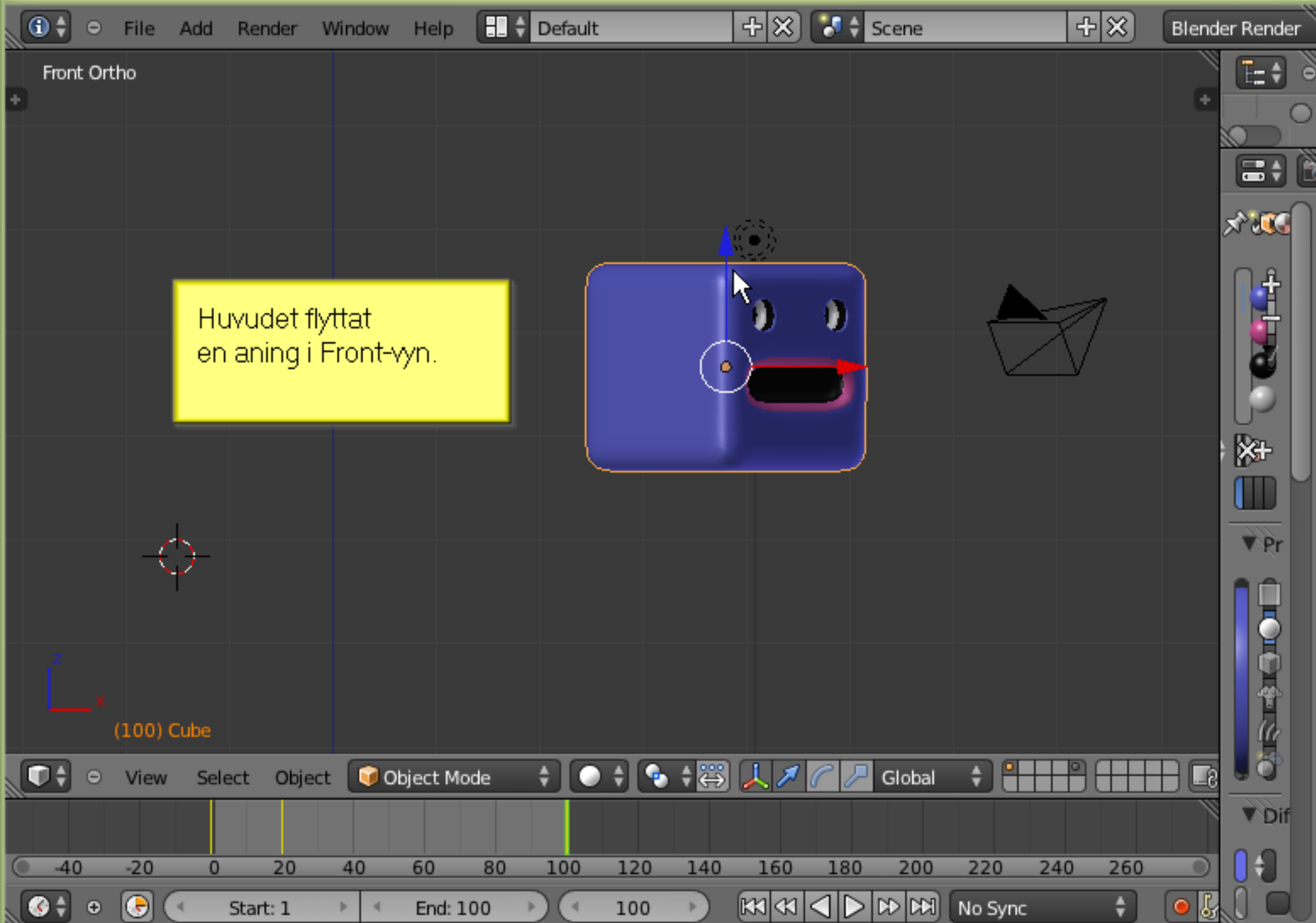


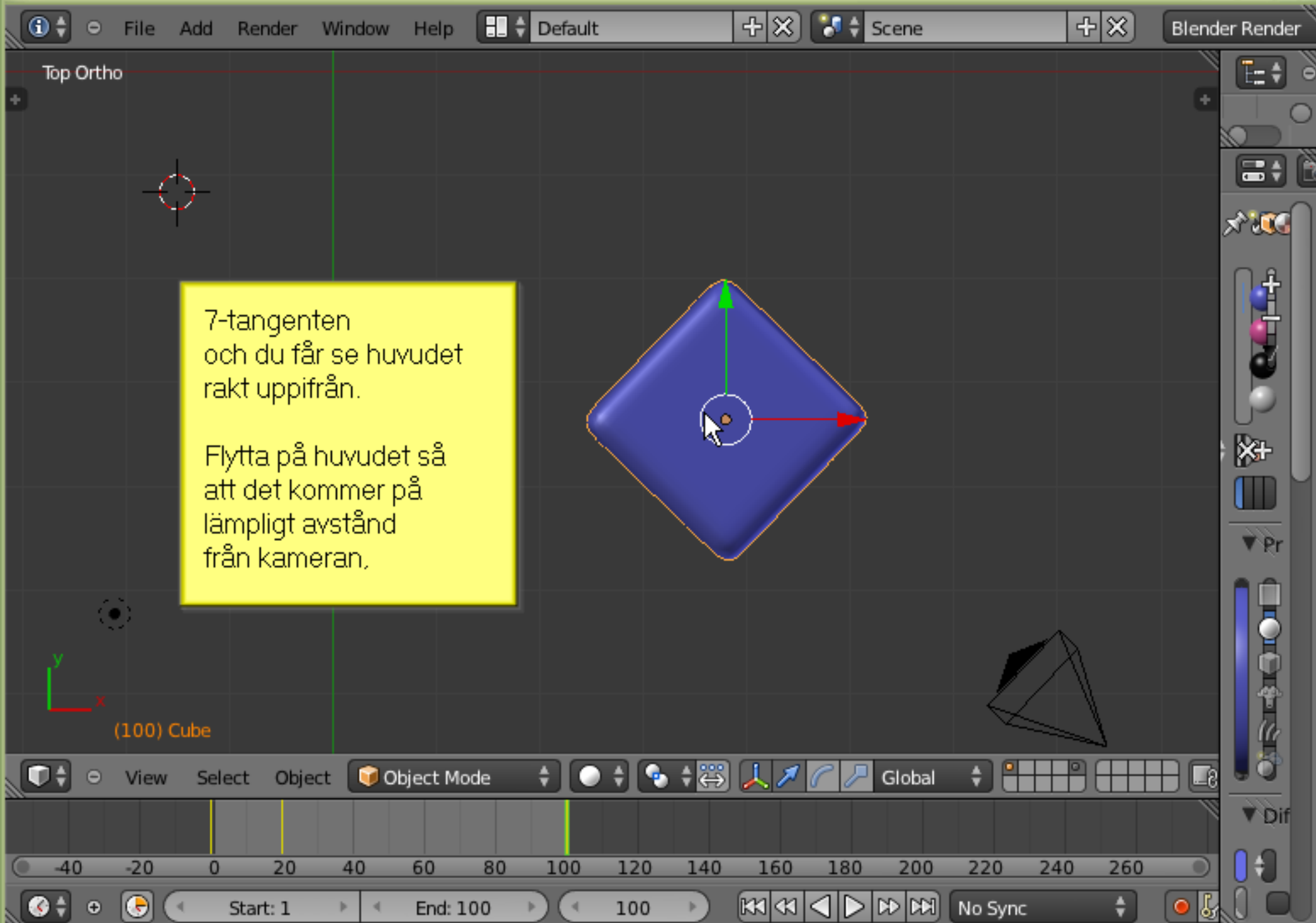


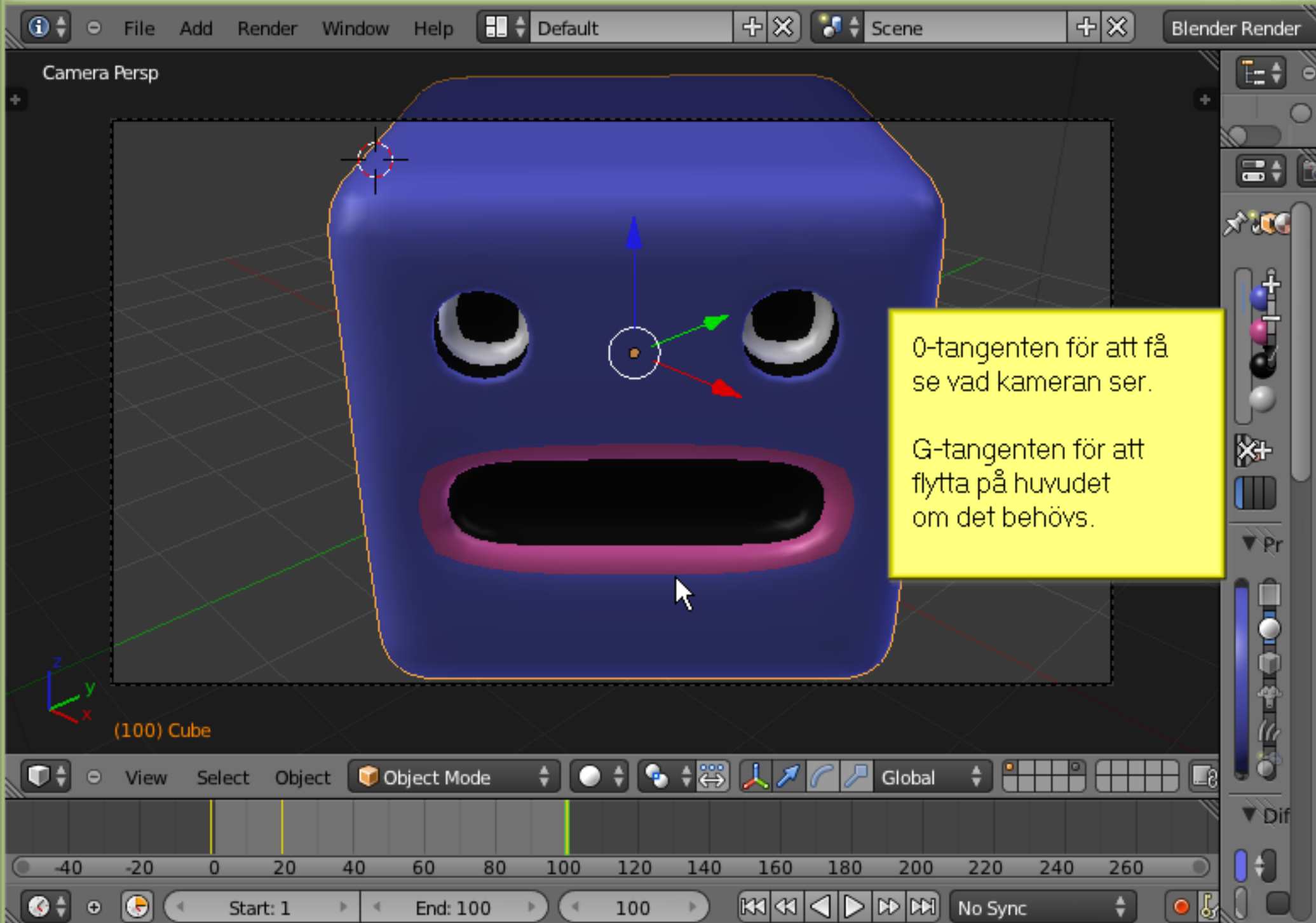


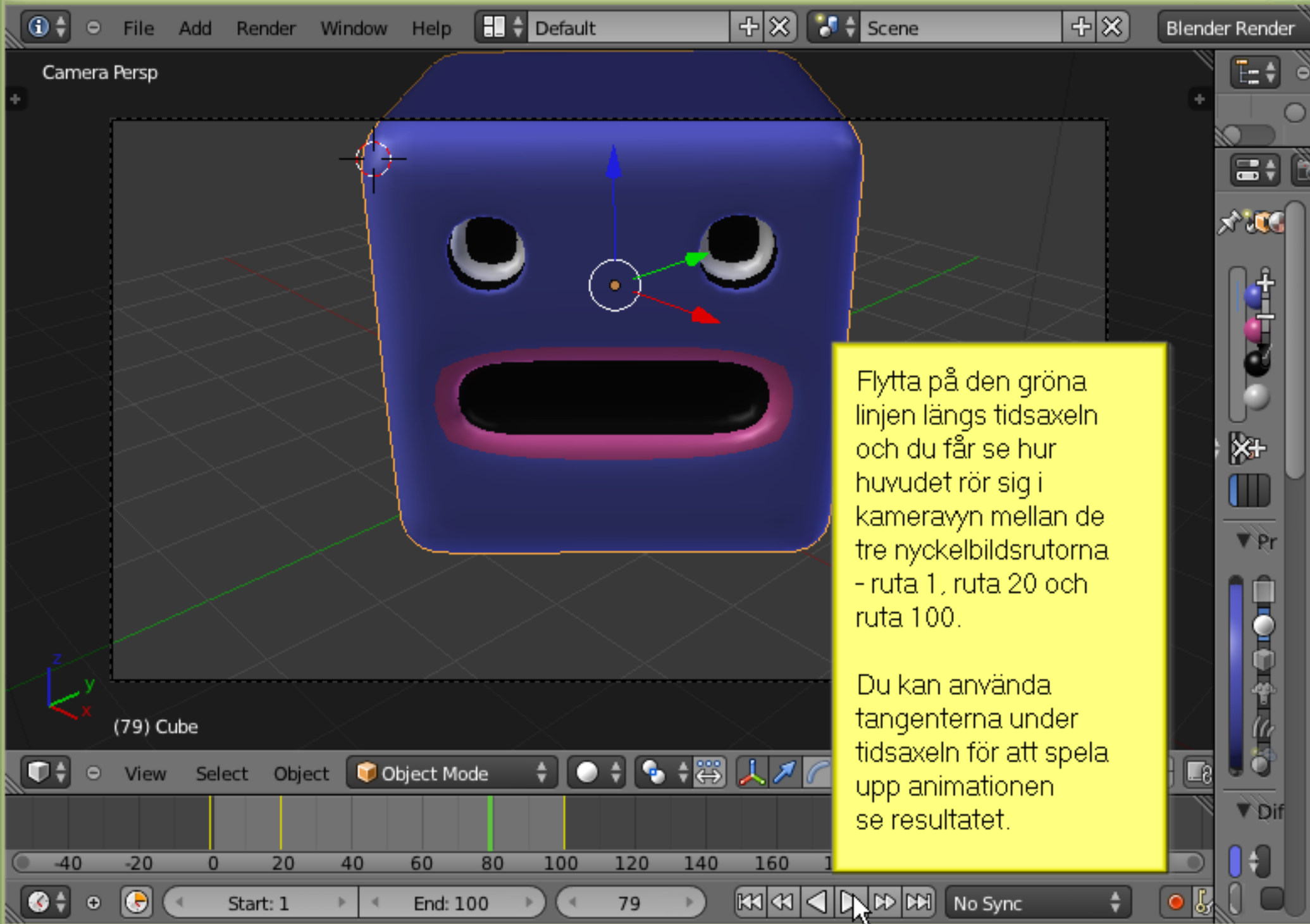


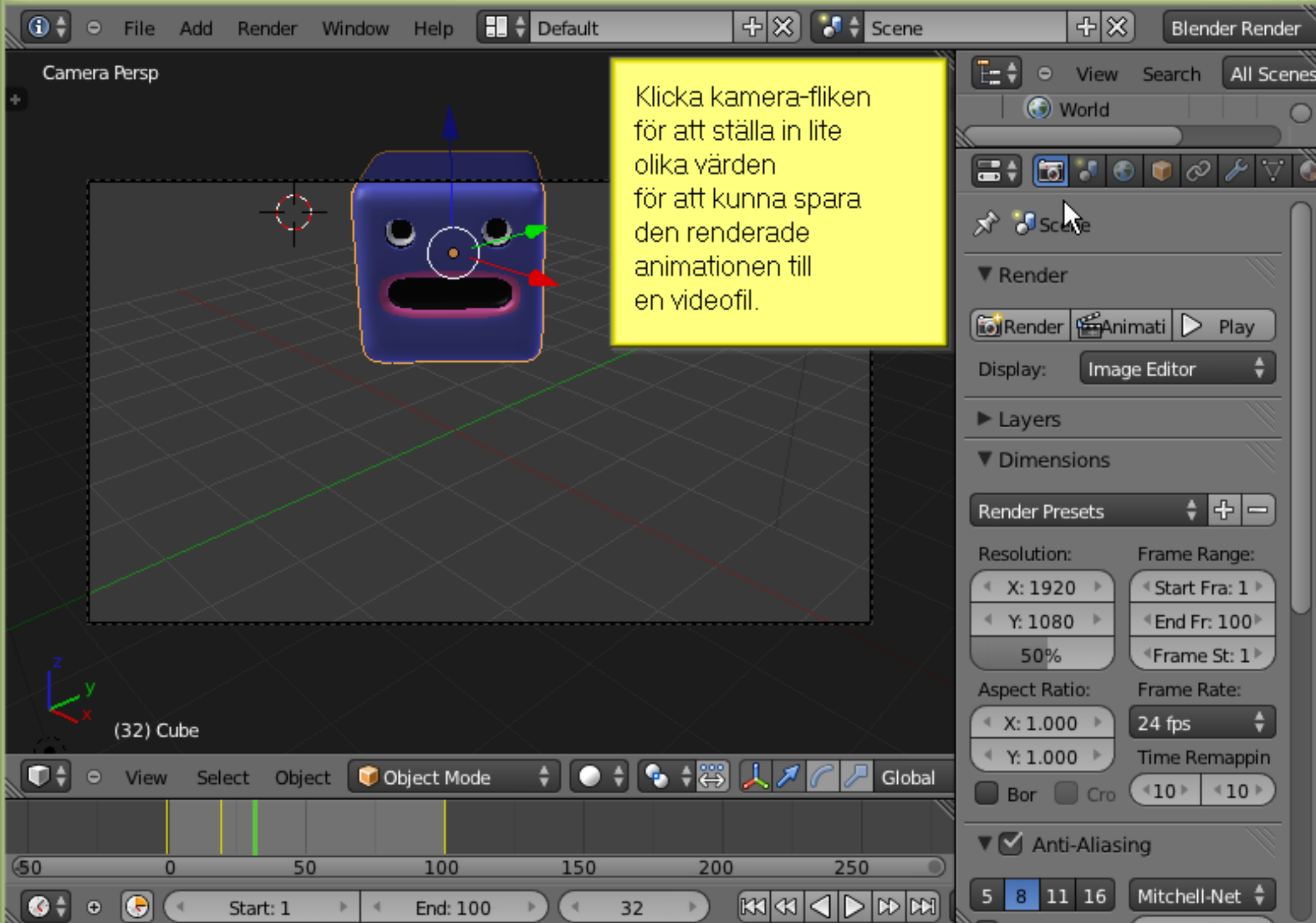












Camera Persp

File Add Render Window Help Default Scene Blender Render

View Search All Scenes

World

Resolution: X: 1920 Y: 1080 50% Frame Range: Start Fra: 1 End Fr: 100 Frame St: 1 Aspect Ratio: X: 1.000 Y: 1.000 Frame Rate: 24 fps Time Remappin: Bor Cro 10 10

Anti-Aliasing 5 8 11 16 Mitchell-Net Full Sample Size: 1.000

Sampled Motion Blur

Shading

Performance

Post Processing

Stamp

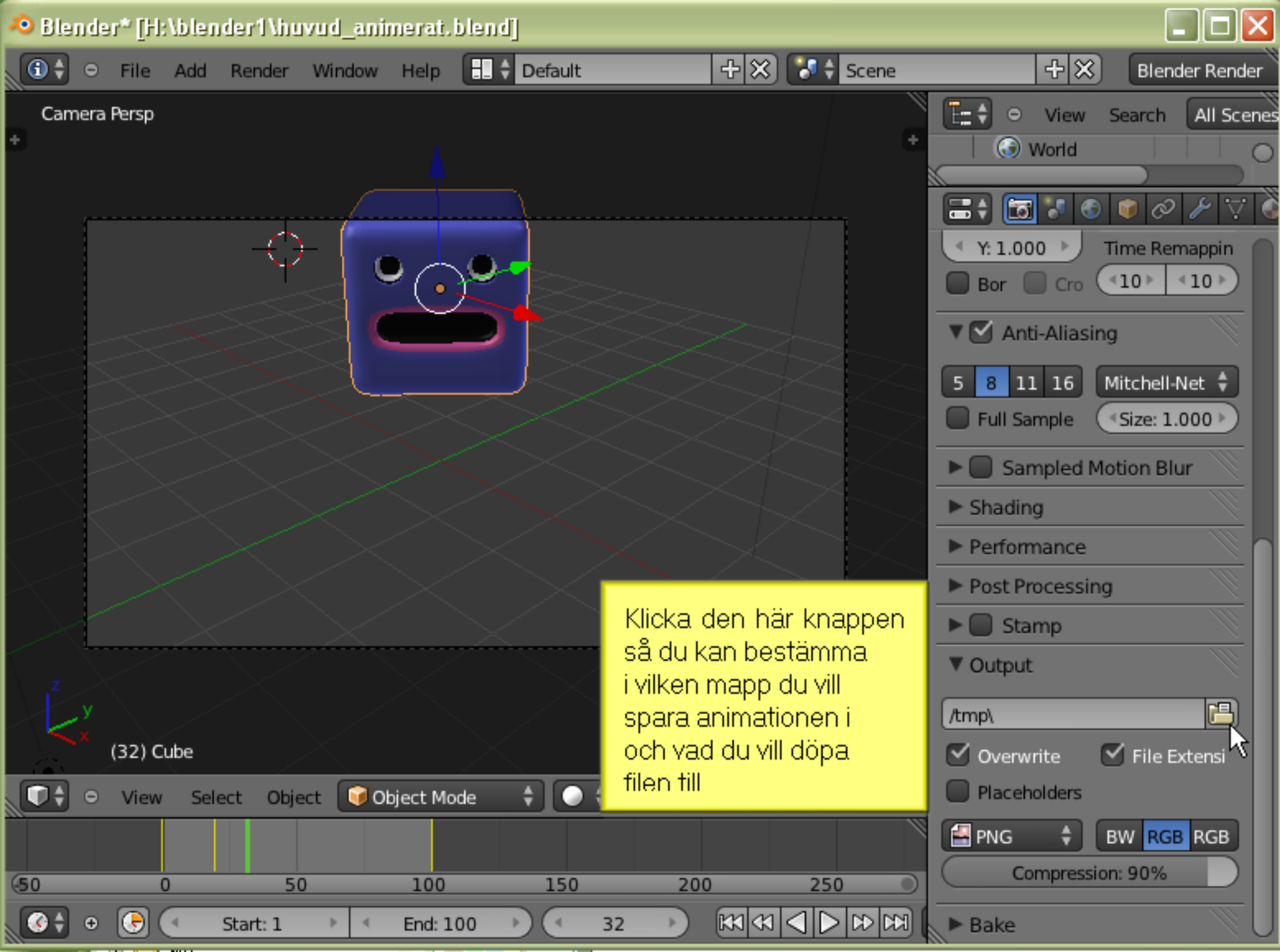
Output /tmp\

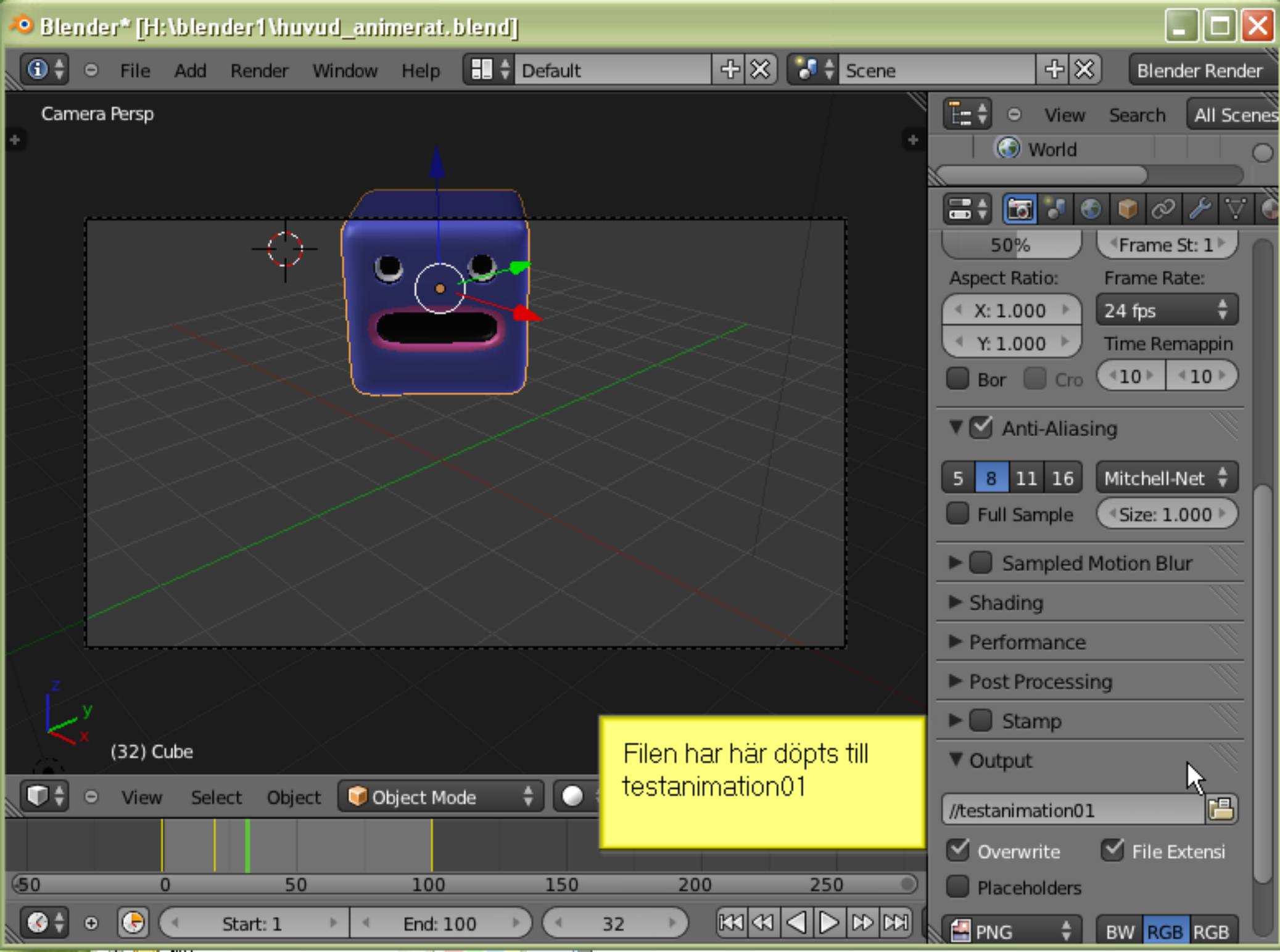
(32) Cube

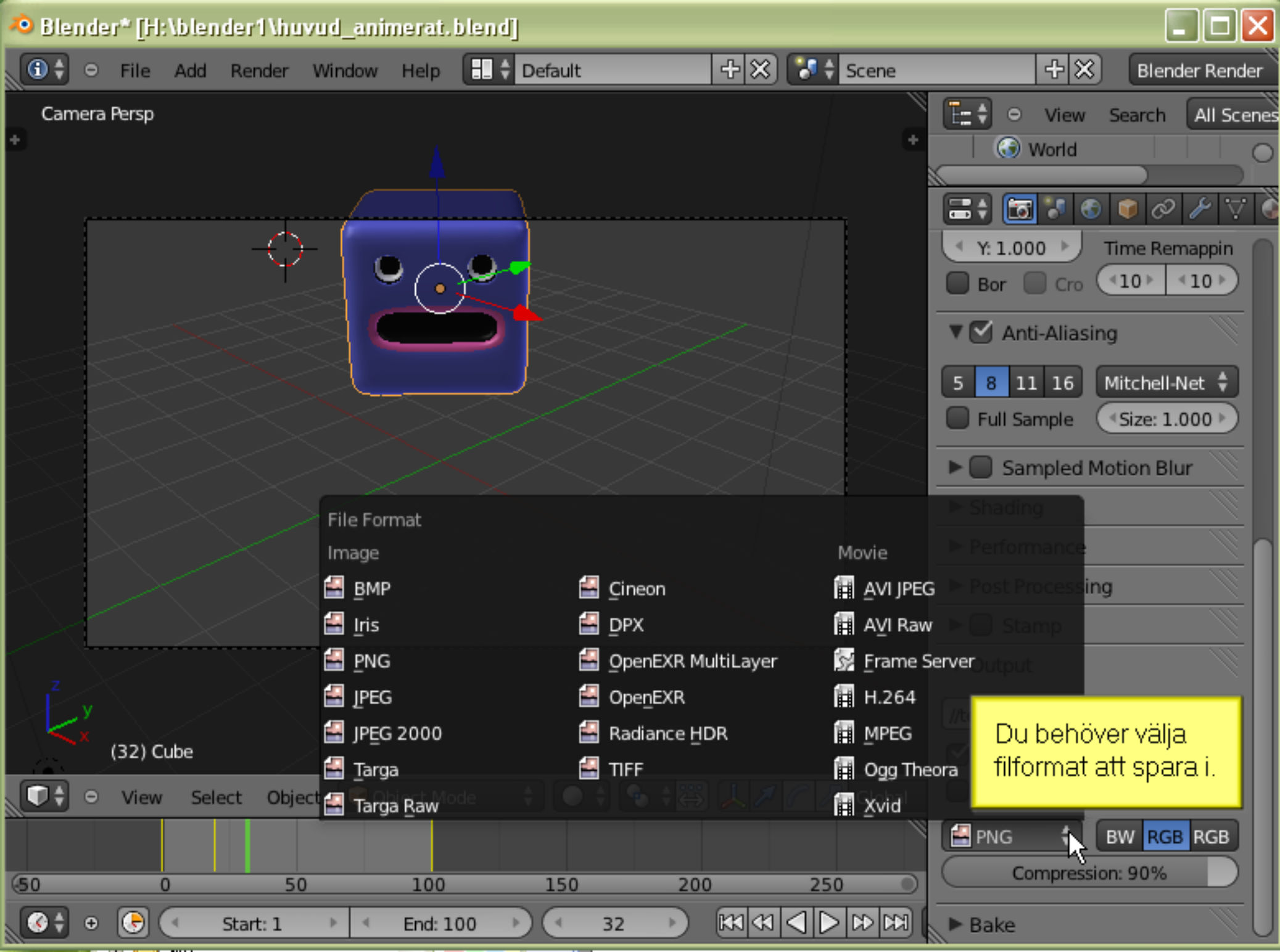
Object Mode

Start: 1 End: 100 32

Du kan se att animationen kommer att spelas in med 24 fps
24 frames per second
24 rutor per sekund







File Format

Image

BMP
 Iris
 PNG
 JPEG
 JPEG 2000
 Targa
 Targa Raw

Cineon
 DPX
 OpenEXR MultiLayer
 OpenEXR
 Radiance HDR
 TIFF

Movie

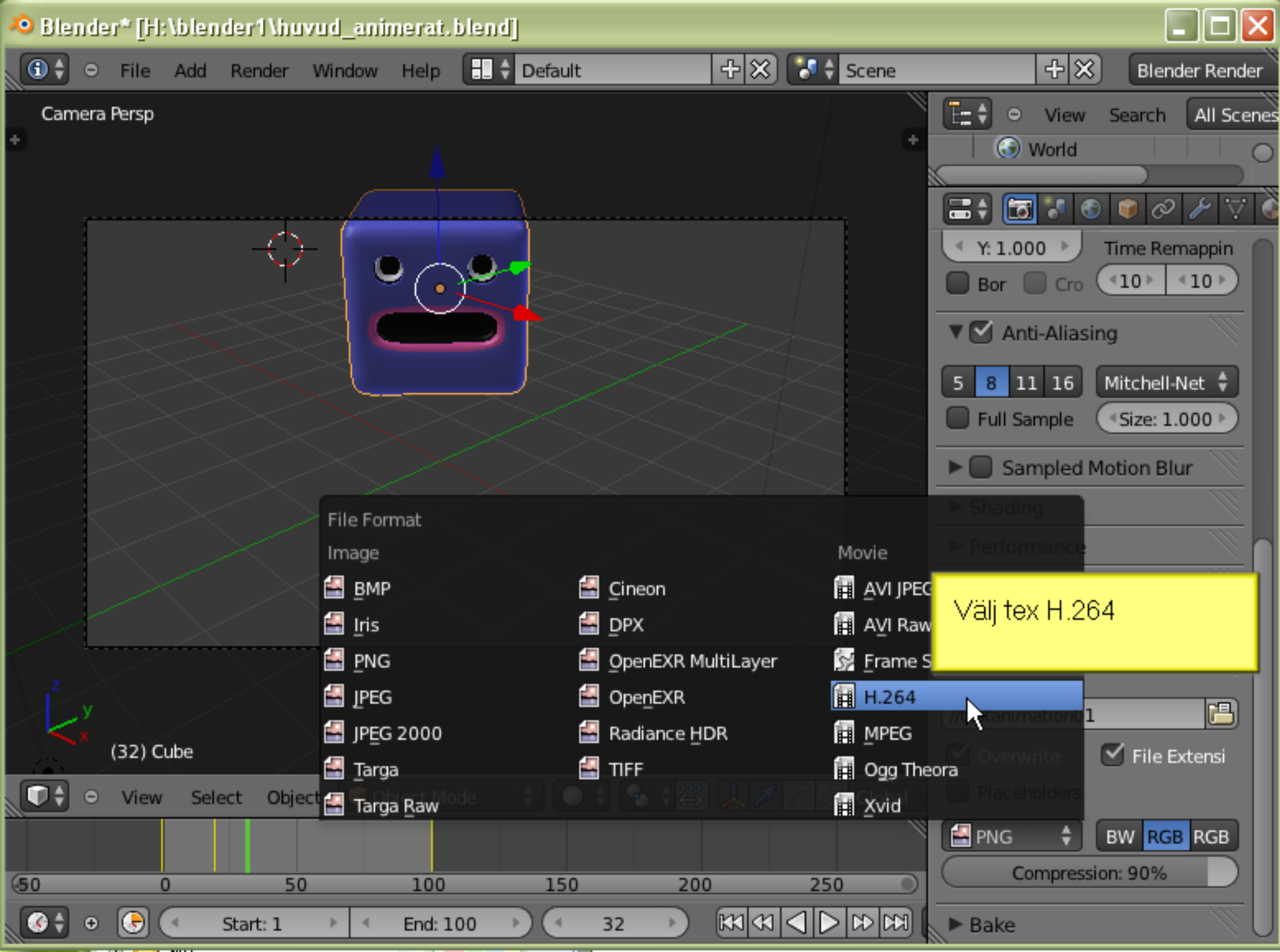
AVI JPEG
 AVI Raw
 Frame Server Output
 H.264
 MPEG
 Ogg Theora
 Xvid

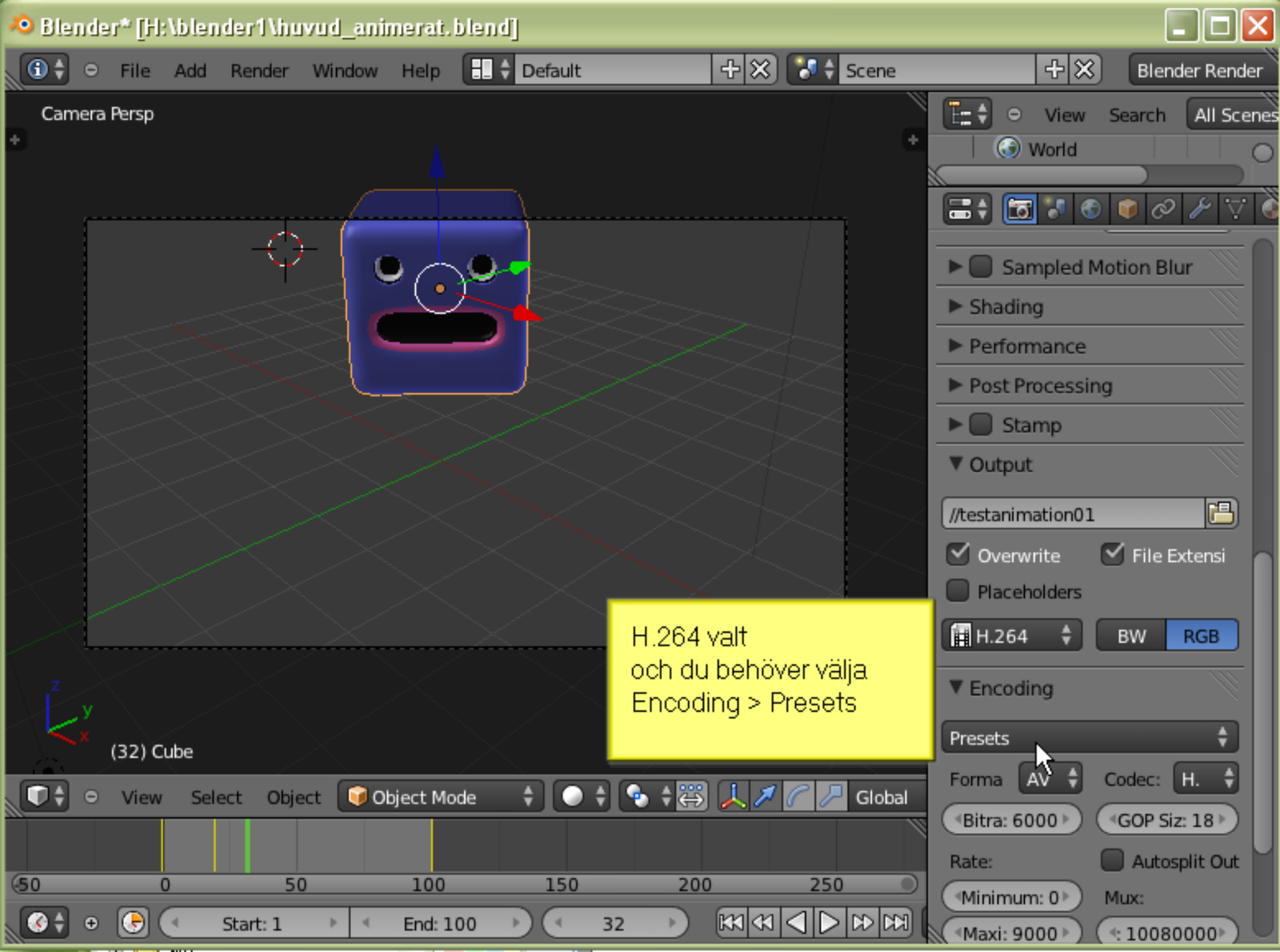
Du behöver välja
filformat att spara i.

PNG BW RGB

Compression: 90%

Bake





Camera Persp

File Add Render Window Help Default Scene Blender Render

World

View Search All Scenes

World

▶ ☐ Sampled Motion Blur

▶ Shading

▶ Performance

▶ Post Processing

▶ ☐ Stamp

▼ Output

Xvid

Theora

H264

VCD

SVCD

DVD

Encoding DV

Presets

Forma H. ☐ Lossless Out

Bitra: 6000 GOP Siz: 18

Rate: ☐ Autosplit Out

Minimum: 0 Mux:

Maxi: 9000 10080000

(32) Cube

View Select Object Object Mode Global

Start: 1 End: 100 32

Välj H.264 också här

Camera Persp

File Add Render Window Help Default Scene Blender Render

World

Render Animati Play

Display: Image Editor

Layers

Dimensions

Render Presets

DVCPRO HD 1080p
DVCPRO HD 720p
HDTV 1080p
HDTV 720p
HDV 1080p
HDV NTSC 1080p
HDV PAL 1080p
TV NTSC 16:9
TV NTSC 4:3
TV PAL 16:9
TV PAL 4:3

Time Range:
Start Fra: 1
End Fr: 100
Frame St: 1
Frame Rate:
4 fps
Time Remappin
10 10
Net

Full Sample Size: 1.000
Sampled Motion Blur

(32) Cube

View Select Object Object Mode Global

Execute a preset

Python: bpy.ops.script.execute_preset(filepath="C:\\Program Files\\Blender Foundation\\Blender\\2.64\\scripts\\presets\\render\\TV_PAL_4_colon_3.py", men

Start: 1 End: 100 32

Under Dimensions
välj storlek på videon
och välj förhållandet
mellan bredd och höjd.
PAL är det
europeiska
videoformatet
och 4:3 är det normala
förhållandet mellan
bildens bredd och höjd

Camera Persp

File Add Render Window Help Default Scene Blender Render

World

Display: Image Editor

Layers

Dimensions

TV PAL 16:9

Resolution: X: 720 Y: 576 100%

Frame Range: Start Fra: 1 End Fr: 100 Frame St: 1

Aspect Ratio: X: 16.000 Y: 11.000

Frame Rate: 25 fps

Time Remappin: Bor Cro 10 10

Anti-Aliasing

5 8 11 16 Mitchell-Net

Full Sample Size: 1.000

Sampled Motion Blur

Shading

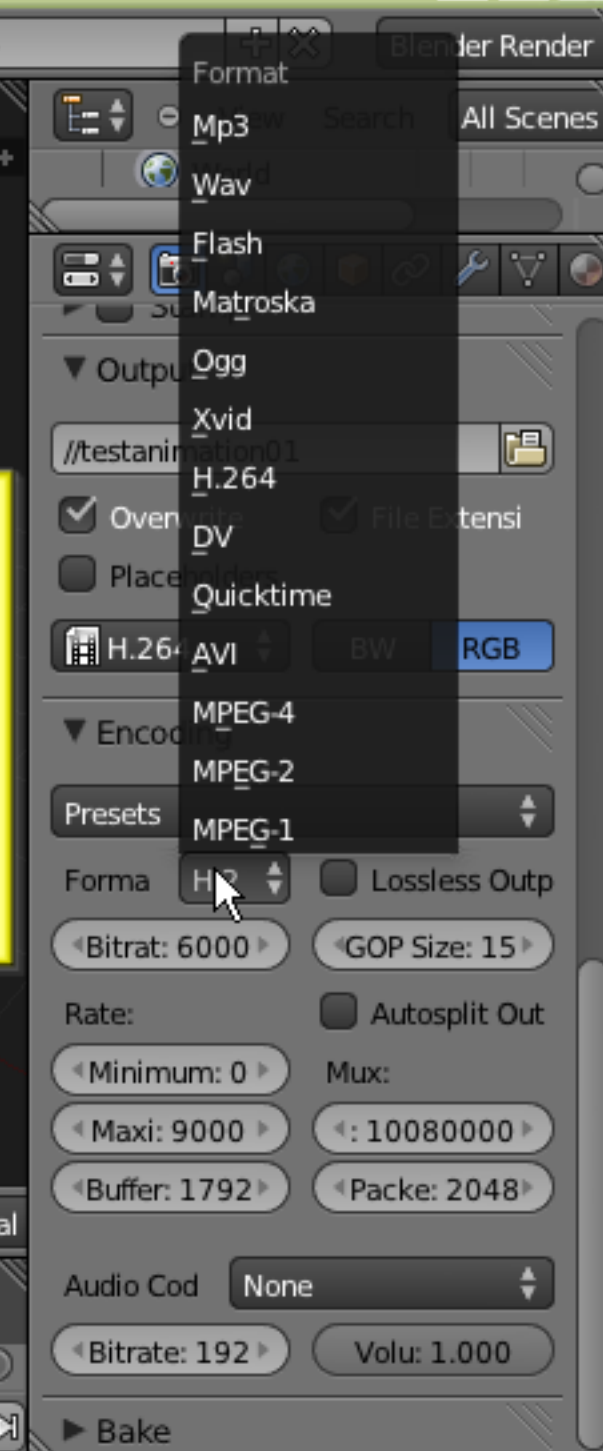
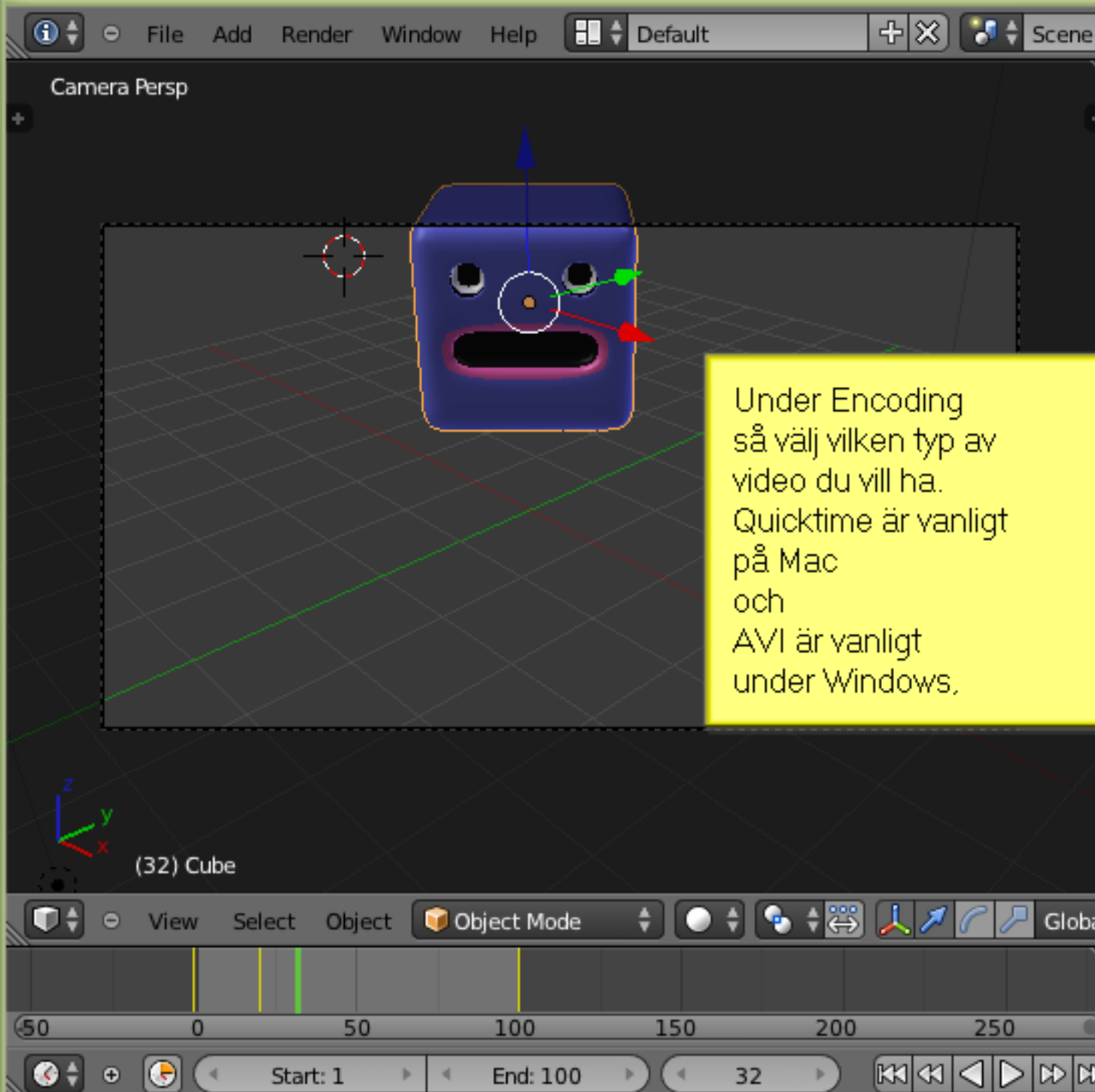
Performance

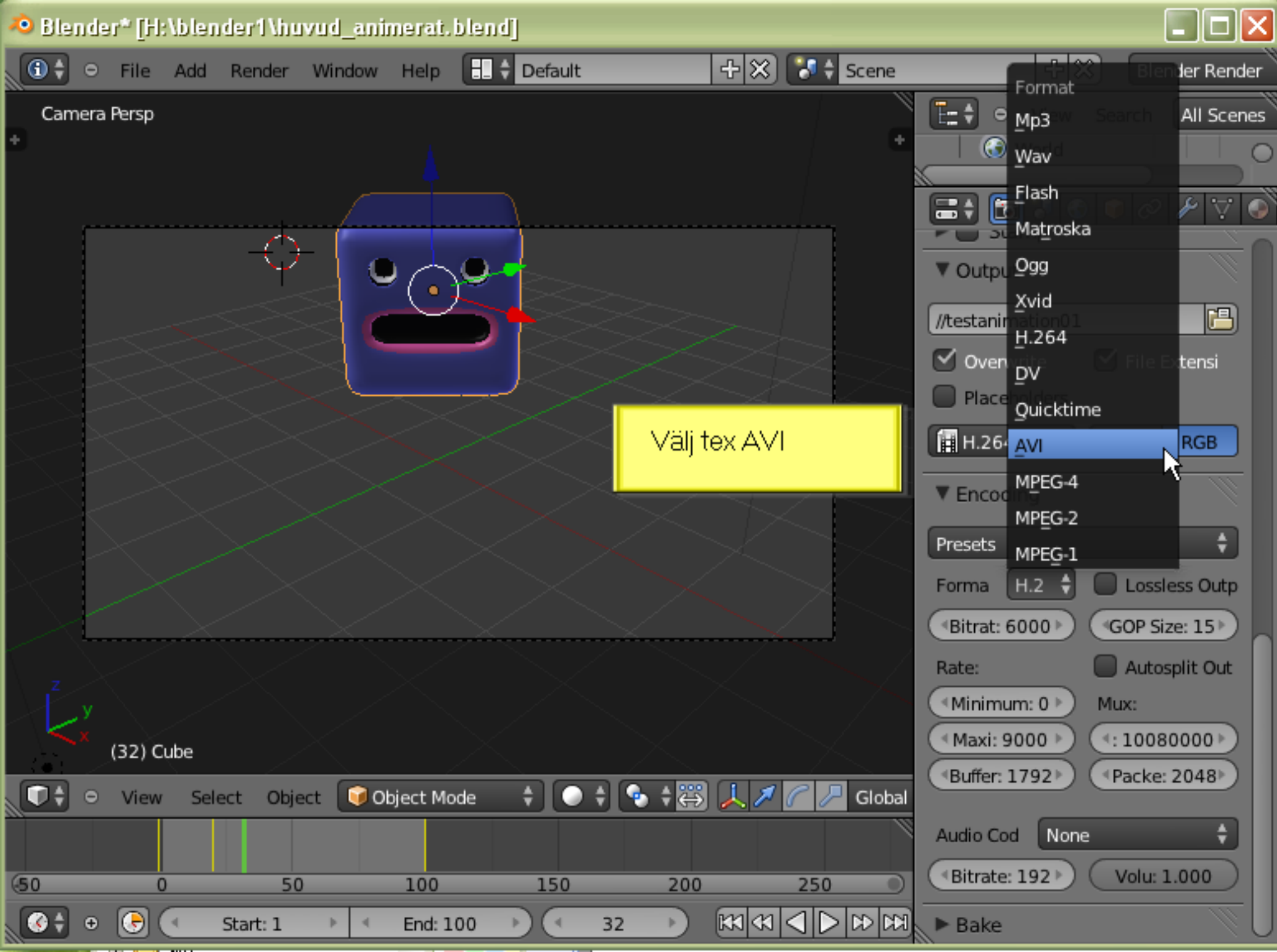
(32) Cube

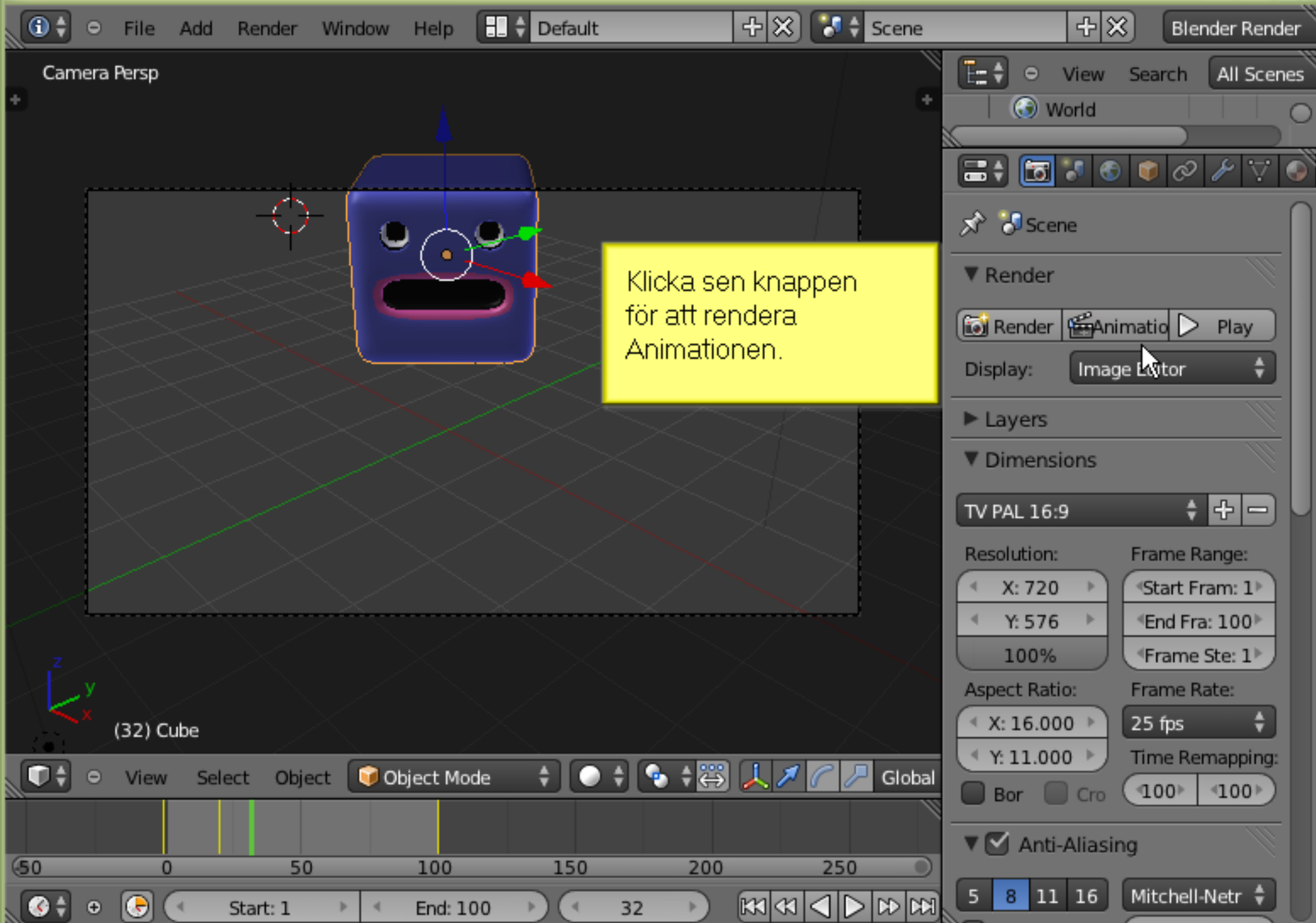
View Select Object Object Mode

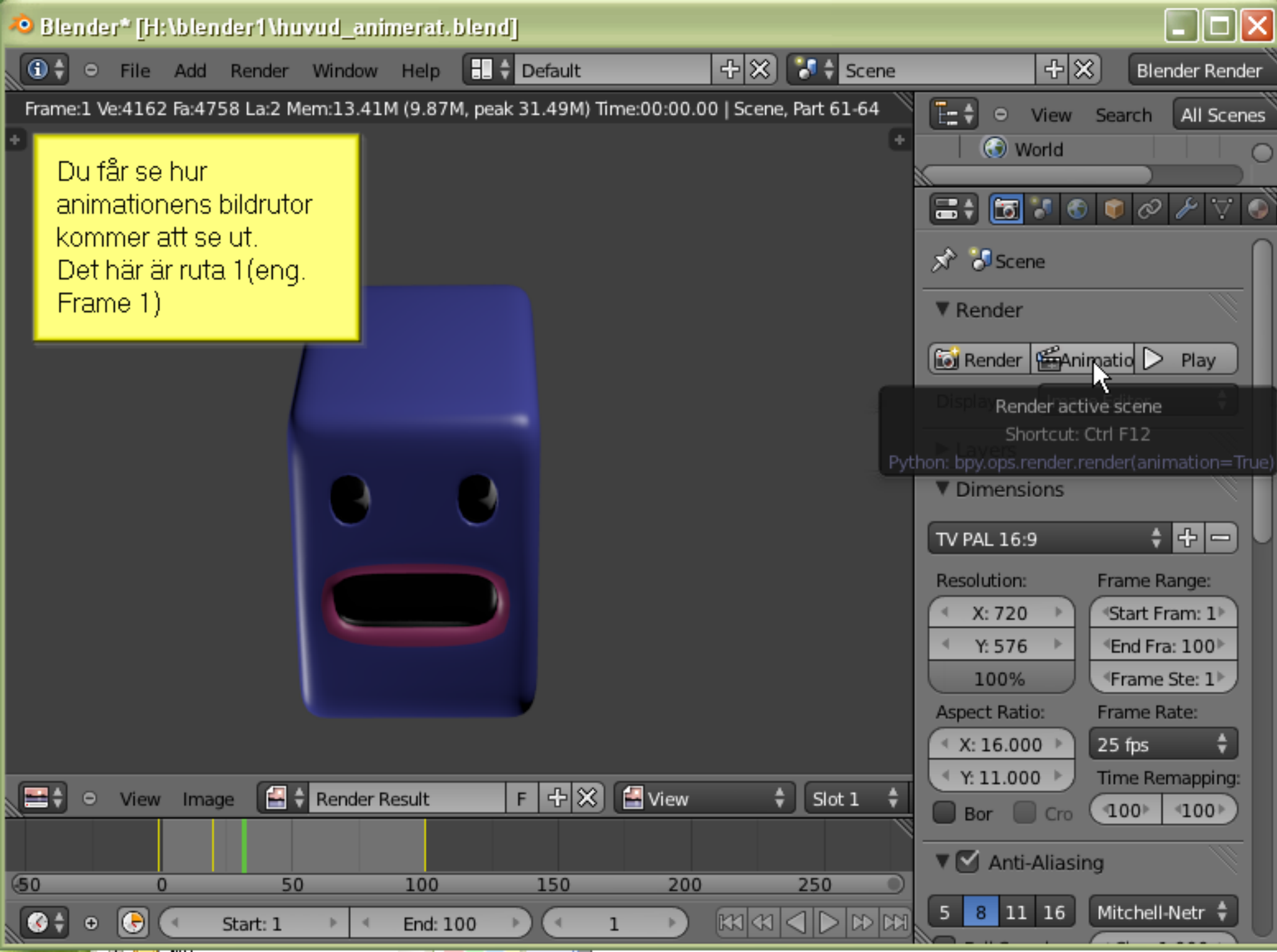
Start: 1 End: 100 32

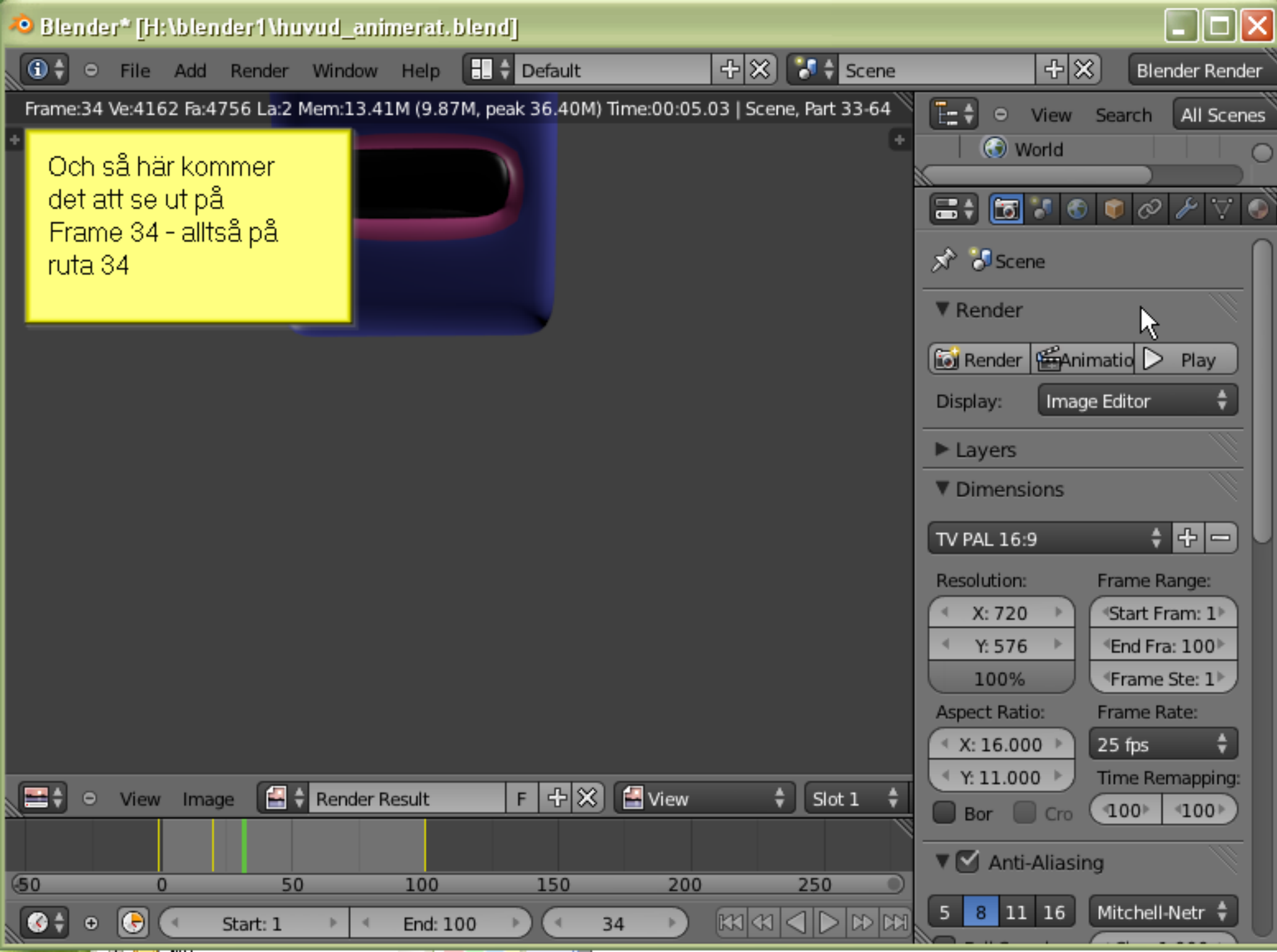
TV PAL 16:9
ger en långsmal bild
Och som du ser så
använder sig PAL av
25 fps - bildrutor per
sekund.











Frame:82 Ve:4162 Fa:4757 La:2 Mem:13.41M (9.87M, peak 36.40M) Time:00:05:42 | Scene, Part 3-64

Ruta 84 ser ut så här.
Inte bra!
Lamporna på scenen
har hamnat bakom
huvudet.

View Search All Scenes

World

Scene

Render

Render

Animation

Play

Display: Image Editor

Layers

Dimensions

TV PAL 16:9

Resolution:

X: 720

Y: 576

100%

Frame Range:

Start Fram: 1

End Fra: 100

Frame Ste: 1

Aspect Ratio:

X: 16.000

Y: 11.000

Frame Rate:

25 fps

Time Remapping:

Bor Cro

100 100

Anti-Aliasing

5 8 11 16

Mitchell-Netr

View Image

Render Result

F

+

X

View

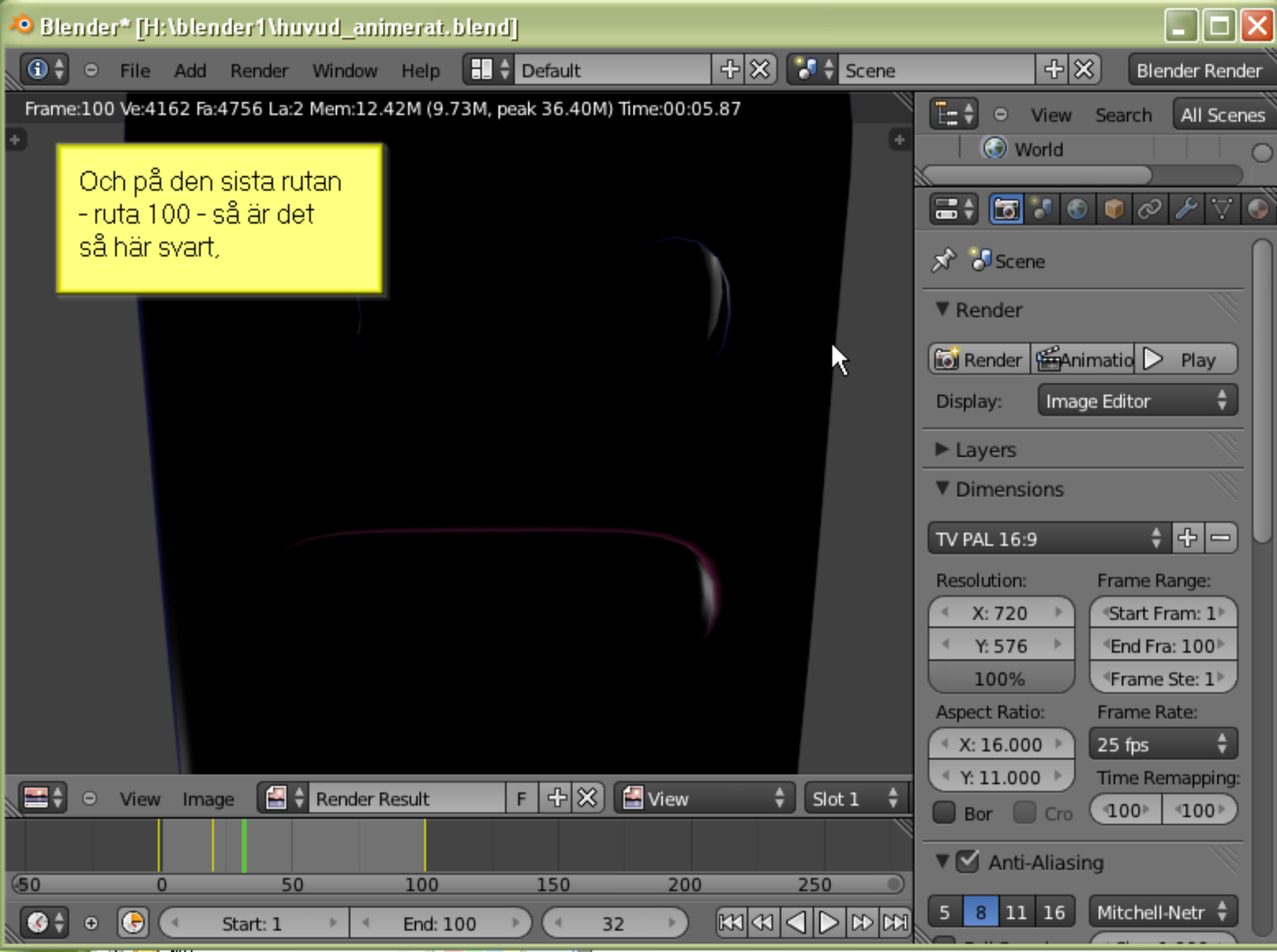
Slot 1

50 0 50 100 150 200 250

Start: 1

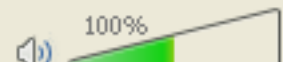
End: 100

82



Frame:100 Ve:4162 Fa:475

När animationen renderat klart så leta reda på var du sparade den på hårddisken. Och spela upp den med det program du har för videouppspelning.



Play
If the playlist is empty, open a medium

View Image

View

Slot 1

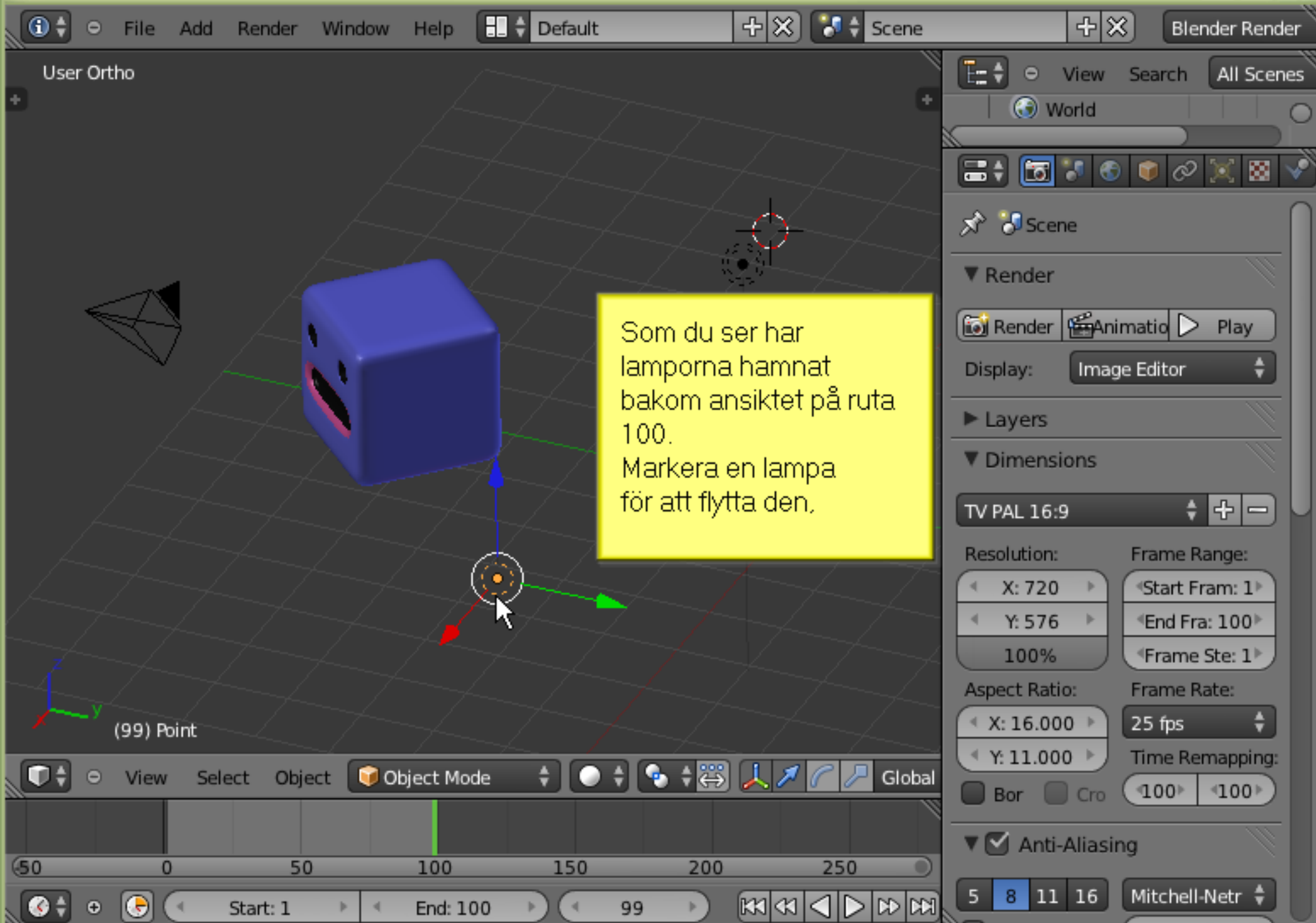
Start: 1

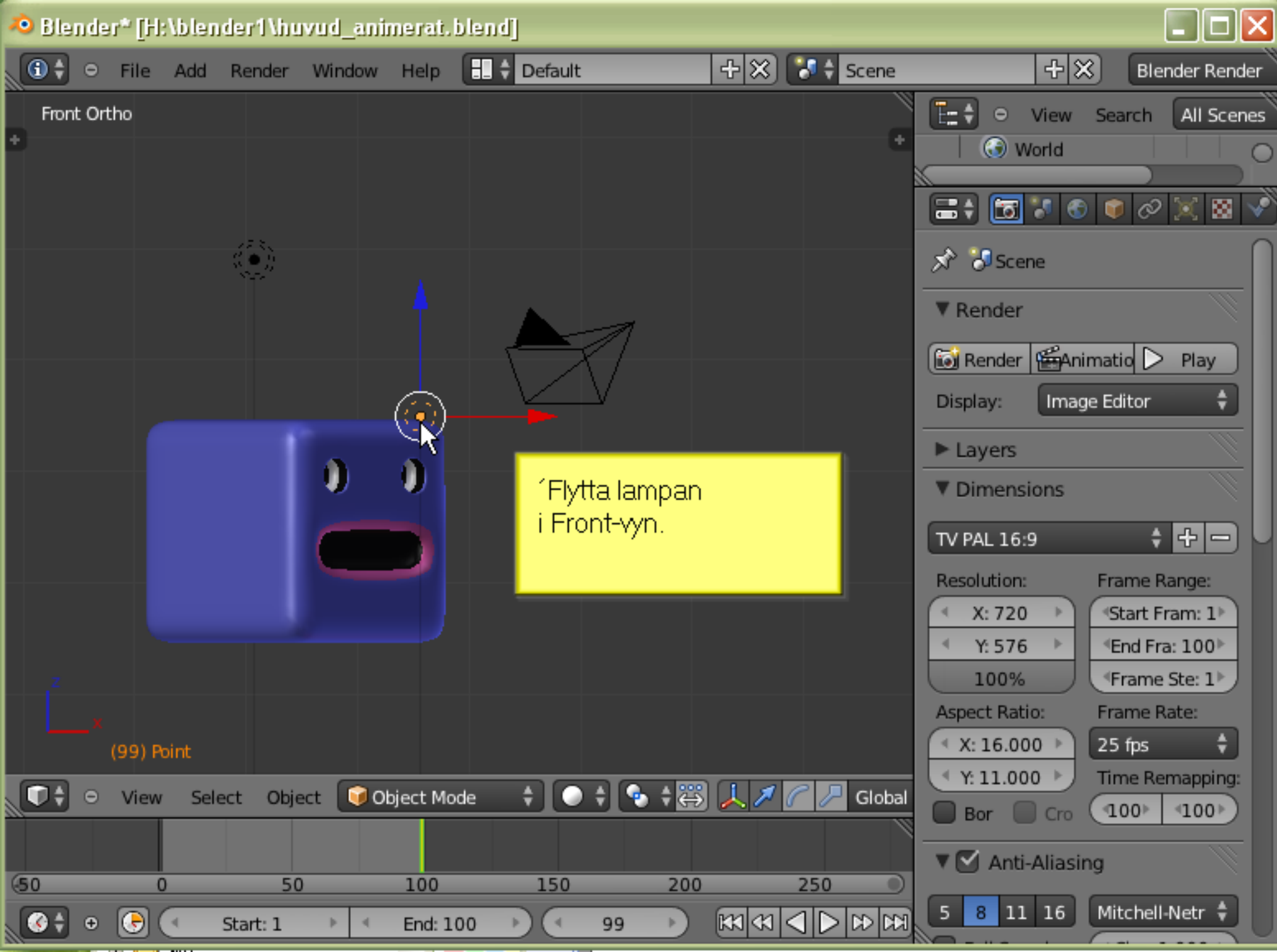
End: 100

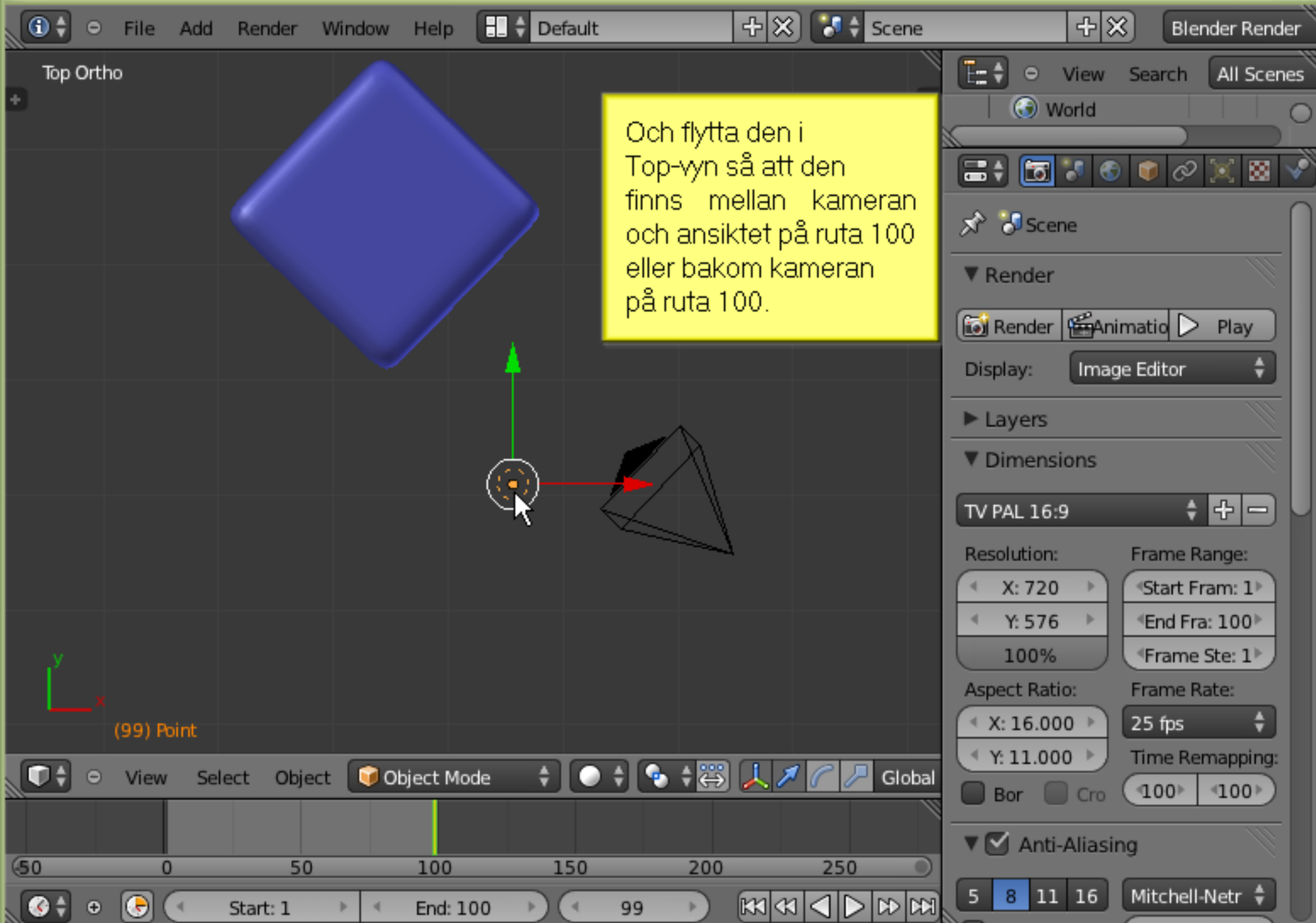
32

5 8 11 16

Mitchell-Netr







- New Ctrl N
- Open... Ctrl O
- Open Recent... Shift Ctrl O
- Recover Last Session
- Recover Auto Save...
- Save Ctrl S**
- Save As... Shift Ctrl S
- Save Copy... Ctrl Alt S
Python: bpy.ops.wm.save_mainfile(check_existing=False)
- User Preferences... Ctrl Alt U
- Save User Settings Ctrl U
- Load Factory Settings
- Link Ctrl Alt O
- Append Shift F1
- Import
- Export
- External Data
- Quit Ctrl Q

Har du flyttat lampan
så kan det vara dags
att spara.

Save the current Blender file

Python: bpy.ops.wm.save_mainfile(check_existing=False)

View Search All Scenes

World

Scene

Render

Render Animation Play

Display: Image Editor

Layers

Dimensions

TV PAL 16:9

Resolution:

X: 720

Y: 576

100%

Frame Range:

Start Fram: 1

End Fra: 100

Frame Ste: 1

Aspect Ratio:

X: 16.000

Y: 11.000

Frame Rate:

25 fps

Time Remapping:

Bor Cro

100

100

Anti-Aliasing

5 8 11 16

Mitchell-Netr

(99) Point

View Select Object Object Mode

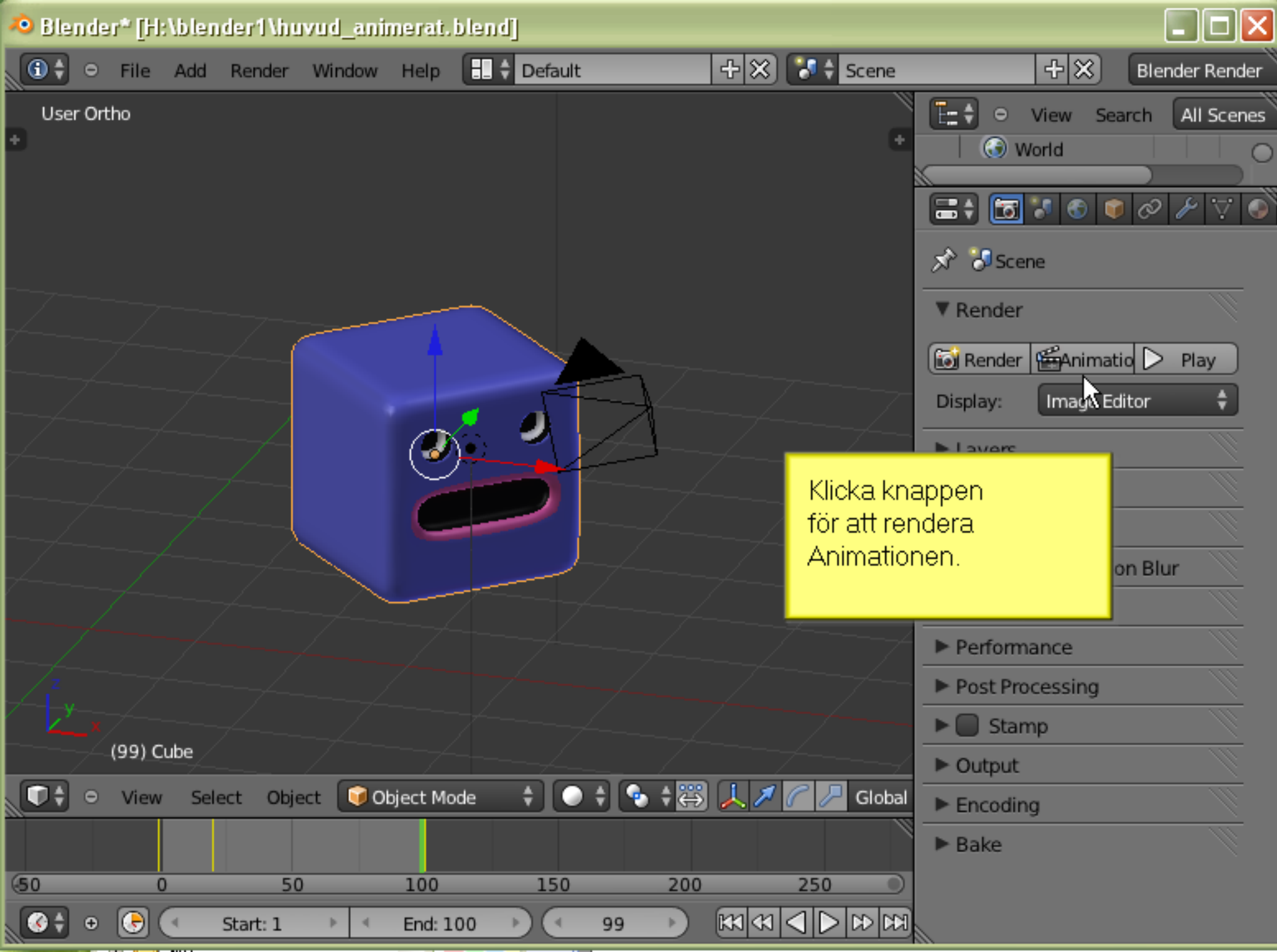
Global

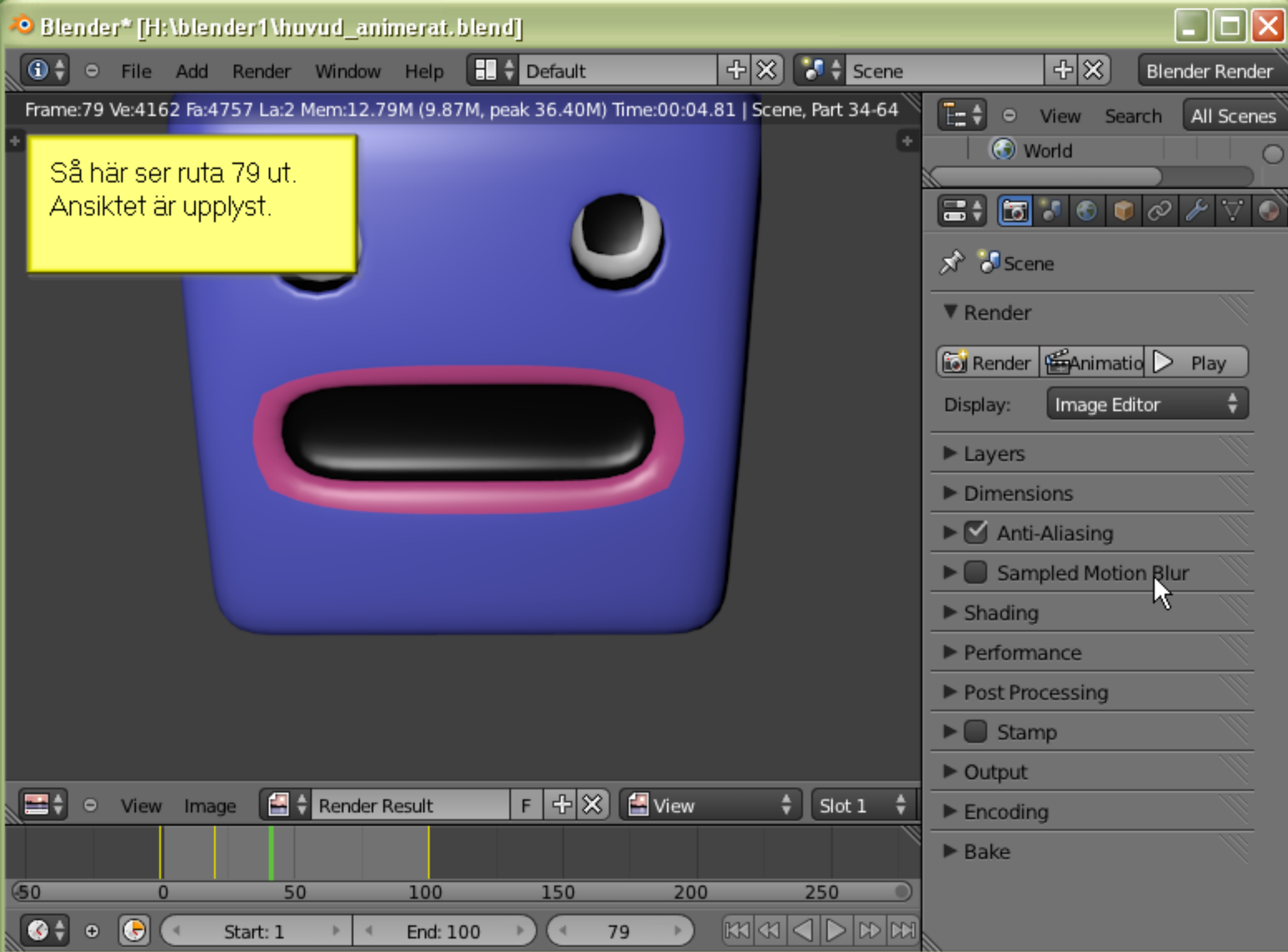
50 0 50 100 150 200 250

Start: 1

End: 100

99







Och ansiktet är också upplyst på
den sista rutan
- rutan100

Nu har du lärt dig
att skapa ett enkelt
huvud och animera det.

Det är bara att fortsätta
experimentera
och du kan också få huvudet
att tala med läppsynk.

Se handledningen om
läppsynk